THE

NAUTICAL ALMANAC

AND

ASTRONOMICAL EPHEMERIS,

FOR THE YEAR 1774.

Publiſhed by ORDER of the

COMMISSIONERS OF LONGITUDE.

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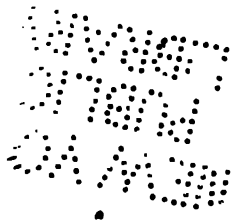


PREFACE.

THE Commiſſioners of Longitude, in purſuance of the Powers veſted in them by Act of Parliament, preſent the Publick with the NAUTICAL ALMANAC and ASTRONOMICAL EPHEMERIS for the Year 1774, being the Eighth Impreſſion, to be continued annually; a Work which muſt greatly contribute to the Improvement of Aſtronomy, Geography, and Navigation. This EPHEMERIS contains every Thing eſſential to general Uſe that is to be found in any Ephemeris hitherto publiſhed, with many other uſeful and intereſting Particulars never yet offered to the Publick in any Work of this Kind. The Tables of the Moon had been brought by the late Profeſſor MAYER of Gottingen to a ſufficient Exactneſs to determine the Longitude at Sea, within a Degree, as appeared by the Trials of ſeveral Perſons who made Uſe of them. The Difficulty and Length of the neceſſary Calculations ſeemed the only Obſtacles to hinder them from becoming of general Uſe: To remove which this EPHEMERIS was made; the Mariner being hereby relieved from the Neceſſity of calculating the Moon's Place from the Tables, and afterwards computing the Diſtance to Seconds by Logarithms, which are the principal and only very delicate Part of the Calculus; ſo that the finding the Longitude by the Help of the EPHEMERIS is now in a Manner reduced to the Computation of the Time, an Operation equal to that of an Azimuth, and the Correction of the Diſtance on account of Refraction and Parallax, which is alſo rendered very eaſy by either of the Two Methods invented by Mr. LYONS and Mr. DUNTHORNE, and publiſhed among the Tables requiſite

requiſite to be uſed with the EPHEMERIS; or by either of the Two Methods annexed to the EPHEMERIS of 1772, being both Improvements of the Method which I formerly publiſhed in the BRITISH MARINER'S GUIDE and PHILOSOPHICAL TRANSACTIONS, the Firſt by myſelf, and the Second by Mr. GEORGE WITCHELL.

By Deſire of the Commiſſioners of Longitude, I drew up the Explanation and Uſe of the Articles contained in the EPHEMERIS, and the Inſtructions, with Examples, for finding the Longitude at Sea by the Help of the ſame. I alſo collected and calculated the Sixteen Firſt Pages of Tables requiſite to be uſed with the EPHEMERIS, and computed the Table of proportional Logarithms, which ſeemed to me abſolutely neceſſary to clear this Method of any remaining Difficulty; and added Explanations of all the Tables, and a Correction, p. 49 and 50, which may be applied by the Curious to the Effect of Refraction on the Moon's Diſtance from a Star, found by Mr. LYONS, or any other Method, on account of the Barometer and Thermometer.

All the Calculations of the EPHEMERIS relating to the Sun and Moon were made from Mr. MAYER's laſt manuſcript Tables, received by the Board of Longitude after his Deceaſe, which have been printed under my Inſpection, and publiſhed in 1770. The Calculations of the Planets were made from Dr. HALLEY's Tables; and the Eclipſes of Jupiter's Firſt and Second Satellites from the Tables of Mr. WARGENTIN, publiſhed by M. DE LA LANDE in 1759; and thoſe of the Third and Fourth Satellites from Tables of the

ſame farther improved by Mr. WARGENTIN, and annexed, the firſt, to the NAUTICAL ALMANAC of 1771, and the other to the CONNOISSANCE DES MOUVEMENTS CELESTES of 1766.

All the Articles of the EPHEMERIS were computed by Two ſeparate Perſons, and examined by a Third, except the Moon's Longitude, Latitude, Right Aſcenſion, Declination, Semidiameter, and Parallax, which, for Noon, were computed by One Perſon, and for Midnight by another, and the Truth of theſe Calculations aſcertained by means of Differences, which, for the Moon's Longitude, were carried as far as the Fourth Order.

To this EPHEMERIS are annexed 1220 Longitudes and Latitudes of the Moon, deduced from the late Dr. BRADLEY's Obſervations, made with the new Meridian Inſtruments at the *Royal Obſervatory* conſtructed by Mr. BIRD, between SEPT. 13th 1750 and Nov. 2d 1760, and compared with a Set of manuſcript Tables improved by Dr. BRADLEY from Profeſſor MAYER's Firſt manuſcript Tables. The greater Part of theſe Calculations was made during Dr. BRADLEY's Lifetime by himſelf and his Aſſiſtant Mr. CHARLES MASON; and what was left unfiniſhed has been completed by Mr. MASON ſince at the Inſtance and at the Expence of the Board of Longitude. A Series of Obſervations this for Number and Exactneſs far excelling any thing of the ſame Kind which the World ever ſaw before, and which preſent or even future Aſtronomers will not eaſily ſurpaſs in Accuracy, affording a ſure Touch-ſtone for trying

the beſt modern Lunar Tables and Theories, and the Means of improving them! Accordingly the Board of Longitude have thought proper to employ Mr. MASON farther in making the neceſſary Calculations for improving MAYER's printed Tables, under my Direction, by the Help of this Series of Obſervations, which comprehends ſomewhat more than a Period of the Moon's Apogee; and I have the Pleaſure to find from that Part of the Work which is already done, that the Corrections (contrary to Expectation) turn out ſo conſiderable as to give Room to hope that, when all the Corrections are made, the greateſt Errors of the Tables may be reduced within a much narrower Campaſs than they are at preſent.

To the Ten Years Series of Lunar Obſervations I have ſubjoined the Elements of the Lunar Tables with which the foregoing Obſervations were compared, and likewiſe the Elements of Profeſſor MAYER's Firſt and Second manuſcript Tables, and of a printed Set of Tables compoſed by the late Mr. GAEL MORRIS; all expreſſed after the Manner of the Formulæ exhibited in p. 52 and 57 of MAYER's THEORIA LUNÆ.

The HADLEY's QUADRANT, which has long been acknowledged the moſt convenient and exact Inſtrument for finding the Latitude by Altitudes of the Sun, having alſo for ſome Years paſt been found the beſt adapted Inſtrument for finding the Longitude at Sea from Obſervations of Diſtances of the Moon from the Sun and Stars, every Improvement in the Conſtruction and Adjuſtment of

this

this valuable Inſtrument becomes a Matter of Importance. I here offer my Attempts for this Purpoſe in Remarks on the Hadley's Quadrant; and if they ſhall be found to extend its Uſe, or augment its Exactneſs, I ſhall have obtained my End.

Laſtly is added, a uſeful aſtronomical Problem to find the Error of a Tranſit Teleſcope, by Mr. LYONS; and Two Examples, by the ſame, of the Calculation of the Longitude from an Obſervation of the Moon, when the general Tables of Refraction and Parallax (which are now completed and will be publiſhed ſhortly) are made Uſe of.

The Circumſtances of the Occultation of Venus by the Moon, DEC. 20th 1772 (this Year) was not ſet down in the Firſt Page of DEC. in the EPHEMERIS for this Year, becauſe it happens in the Day-time, and it was doubted whether it would be viſible. But as it may be expected to be ſeen with a good Teleſcope, if the Air ſhould prove clear, I ſhall ſet down the Particulars of the Occultation in this Place.

	Apparent Time at Greenwich. H. M. S.	M. S.	
Firſt Contact .	20. 49. 13	♀ 15. 30	North of ☽'s Center.
Total Immerſion	20. 51. 3		
Begin. of Emerſ.	21. 15. 29	♀ 15. 34	North of ☽'s Center.
Laſt Contact .	21. 17. 23		

Let me remark alſo, that the Firſt Impreſſion of the Moon on the Sun, in the ſmall ſolar Eclipſe of OCT. 25th of this Year, will happen 44° to the Weſt of the Sun's uppermoſt Point; but as the

greateſt Impreſſion of the Moon on the Sun at the Middle of the Eclipſe is only One Fourth of a Minute by the Tables, if there ſhould happen to be a ſmall Error of the Tables in Latitude, the Circumſtances of the Eclipſe may differ widely from thoſe ſet down, or it may prove no Eclipſe at all.

I cannot conclude this Preface without taking Notice of ſome Remarks made on the Calculations of the Sun in the NAUTICAL ALMANACS of 1769 and 1770, by M. BERNOUILLI, Aſtronomer to his PRUSSIAN Majeſty, in his RECUEIL POUR LES ASTRONOMES, which might lead thoſe who ſhould not take the Pains to examine the Matter to think that the Calculations of the NAUTICAL ALMANAC are not made with that Care which the Public have a Right to expect. M. BERNOUILLI's words, p. 20 and 21, are as follow.: "Ayant calculé un "grand nombre de lieux du Soleil à midi vrai, "pour l'année paſſée & pour celle-ci (1770) & "pour les Méridiens de Vienne, de Paris, & de "Greenwich, il m'a paru que ces calculs ſe faiſoient "avec le plus de ſoin dans le prémier endroit; "les erreurs étoient ordinairement nulles, & je n'en "ai trouvé que deux qui paſſaſſent 2″. Dans l'Al-"manac Nautique, les longitudes du Soleil m'ont "paru fort exactes pour l'uſage auquel cet ouvrage "eſt deſtiné; les erreurs ne ſe ſont jamais trouvé "nulles, mais auſſi la plus grand n'a été que de "13″. J'ai remarqué deux erreurs plus fortes "dans la connoiſſance des tems, mais en revanche "l'erreur aſſés ſouvent étoit 0." In Engliſh, thus: "Having calculated a great many Longitudes of "the

" the Sun at apparent Noon in the laſt Year and " in the preſent Year 1770, and for the Meridians " of VIENNA, PARIS, and GREENWICH, it appeared " to me that theſe calculations were made with the " moſt care for the Firſt Place [namely, in the " Ephemerides of VIENNA] the Errors were com- " monly nothing, and I found only Two which " exceeded Two Seconds. In the NAUTICAL AL- " MANAC the Longitudes of the Sun appeared to " me very exact for the Uſe for which this Work " is intended; the Errors were never nothing, " but then the greateſt Error was only 13″. I have " remarked Two Errors greater than this in the " CONNOISSANCE DES TEMPS; but, in Return, " the Error was often nothing."

Being ſatisfied from my own Calculations, and thoſe of other able Computers, that the Calculations of the NAUTICAL ALMANAC here alluded to are made with all poſſible Care and Exactneſs, that the Error is commonly nothing, and never exceeds One or Two Seconds at moſt, I might call upon Mr. BERNOUILLI to point out the Days where he ſuppoſes the Calculations to be faulty, and to produce his own Calculations, but that his own Words in the Page preceding thoſe already cited are ſufficient to ſhew the Miſtake to have been his own in ſuppoſing the Calculations of the Sun's Longitude in the NAUTICAL ALMANAC, like thoſe in the Ephemerides of Vienna and in the Connoiſſance des Temps, to be made from DE LA CAILLE's Solar Tables, whereas they were really made from MAYER's Solar Tables.

His

His words in p. 19 are theſe: " On eſt étonné " en ouvrant les Ephémérides les plus célebres, de " trouver entre les Tables de l'Equation du Temps, " des différences bien plus conſidérables que celles " qui réſultent de la différence des Méridiens pour " leſquelles ces Ephémérides ſont calculées, d'autant " que depuis la publication des célebres Tables du " Soleil de feu M. de la Caille, tous les Calculs du " Soleil ont, je crois, été faits ſur ces Tables, ſi ce " n'eſt dans les Ephémérides de Bologne, où l'on a " ſuivi les Tables de Halley, & dans leſquelles, " au reſte on ne trouve pas l'Equation du Tems. " J'eus du moins cette ſurpriſe en comparant en- " ſemble rélativement à cette Equation, les Ephé- " mérides de Vienne, celles de M. l'Abbé de la " Caille, la Connoiſſance des Temps, & l'Amanac " Nautique de M. Maſkelyne."

In Engliſh thus: " It is a Matter of Surprize to " find that the Equation of Time in the moſt cele- " brated Ephemerides differs more than what ſhould " ariſe from the Difference of Meridians for which " they are calculated, conſidering that ſince the pub- " lication of the celebrated Solar Tables of the late " M. DE LA CAILLE, all the Calculations of the " Sun have, I believe, been made from theſe Tables, " except in the Ephemerides of Bologna, where " HALLEY's Tables have been followed, in which " however the Equation of Time is not ſet down. " At leaſt I was myſelf ſtruck with Surprize upon " comparing together the Ephemerides of Vienna, " thoſe of M. l'Abbé DE LA CAILLE, the Con- " noiſſance des Temps, and Nautical Almanac of " Mr. MASKELYNE."

From

From hence it appears, that M. BERNOUILLI took it for granted that the Longitudes of the Sun in the NAUTICAL ALMANAC were calculated from DE LA CAILLE's Solar Tables. But he might have been eaſily ſatisfied to the contrary, if he would but have taken the Trouble to conſult the Preface of any one of the NAUTICAL ALMANACS from 1767 to the preſent, in which he would have found theſe Words, "All the Calculations of the EPHEMERIS "relating to the Sun and Moon were made from "Mr. MAYER's laſt manuſcript Tables, received "by the Board of Longitude after his Deceaſe, "which have been printed under my Inſpection." Therefore after all the wonder is, not that Calculations of the NAUTICAL ALMANAC ſhould ſometimes differ 13′ from DE LA CAILLE's Solar Tables, but rather that they ſhould never differ more from theſe Tables which they were not computed from. It will eaſily be allowed that theſe Tables may ſometimes differ from MAYER's by 13″, and in Effect I find that the Difference of the Tables may ſometimes, though very rarely, amount to 17″. The greater errors which M. BERNOUILLI finds in the Calculations of the Connoiſſance des Temps, with reſpect to the Tables from which they were really computed, it is neither my Buſineſs to aggravate or excuſe. On the whole, I would not be underſtood to inſinuate that I thought M. BERNOUILLI had any Deſign of miſrepreſenting the Truth on this Occaſion: I believe the contrary, and entertain the ſame Eſteem for the Talents and Spirit of this young Aſtronomer as when I had the Pleaſure of his Acquaintance during his Viſit to ENGLAND; and from a Letter of his which I have ſeen addreſſed

to

to one of his Correſpondents here, am aſſured he will have the Candor to acknowledge and rectify his Miſtake in the next Volume of his RECUEIL POUR LES ASTRONOMES.

NEVIL MASKELYNE,
ASTRONOMER ROYAL.

GREENWICH,
JULY 2d,
1772.

Erratum of Elements of Lunar Tables.

Page 44. Maximum of 8th Equation of Latitude in Mayer's printed Tables; for + 0°, 0′. 3, 7″. read — 0°. 0′. 3, 7″.

EXPLA-

EXPLANATION of the Characters uſed in the EPHEMERIS.

The PLANETS, &c.

☉ The Sun.
☾ The Moon.
☿ Mercury.
♀ Venus.
♂ Mars.
♃ Jupiter.
♄ Saturn.
☊ The Moon's, or any other Planet's Aſcending Node.
☋ The Deſcending Node.
☌ Conjunction, or Planets ſituated in the ſame Longitude.
☍ Oppoſition, or Planets ſituated in oppoſite Longitudes, or differing 6 Signs from each other.

Signs of the Zodiac.

S.		S.	
0.	♈ Aries.	6.	♎ Libra.
1.	♉ Taurus.	7.	♏ Scorpio.
2.	♊ Gemini.	8.	♐ Sagittarius.
3.	♋ Cancer.	9.	♑ Capricornus.
4.	♌ Leo.	10.	♒ Aquarius.
5.	♍ Virgo.	11.	♓ Piſces.

ECLIPSES for the YEAR 1774.

March 11. ☉ eclipſed, inviſible.
☌ at 21ʰ. 55½′. in 11ˢ. 21°. 56′. ☽'s Lat. 0°. 1¾′. N. The Sun will be centrally eclipſed on the Merid. at 21ʰ. 57′. in Lat. 1¾° South, and Long. 30¾° Eaſt of Greenwich.

Sept. 5. ☉ eclipſed, inviſible.
☌ at 13ʰ. 59′. in 5ˢ. 13°. 28′. ☽'s Lat. 0°. 2′ N. The Sun will be centrally eclipſed on the Merid. at 13ʰ. 58′, in Lat. 9° North, and Long. 150½° Eaſt of Greenwich.

Obliquity

	Obliquity of Ecliptic.	Equat. of Equin. Points.
1774.	° ′ ″	″
Jan. 1.	23. 27. 58,1	— 1,3
Apr. 1.	23. 27. 58,1	— 2,8
July 1.	23. 27. 58,1	— 4,3
Oct. 1.	23. 27. 58,3	— 5,7
Dec. 31.	23. 27. 58,5	— 7,1

Errata of Mayer's Tables.

Explicatio et usus tabularum, p. 73, l. 21. for longitudinis read latitudinis.

Page 41. tables. Epoch of moon's agogee for 1774 for 2°. 7°. 22′. 12″. read 2°. 7°. 32′. 12″.

EXTRACT from the Act of Parliament concerning the Longitude, made in the Fifth Year of the Reign of his preſent Majeſty.

WHEREAS the Publication of Nautical Almanacs conſtructed by proper Perſons, under the Direction of the ſaid Commiſſioners, would greatly contribute to make the ſaid Lunar Tables more generally uſeful; Be it further Enacted, by the Authority aforeſaid, That it ſhall and may be lawful to and for the ſaid Commiſſioners to cauſe ſuch Nautical Almanacs, or other uſeful Tables, to be conſtructed, and to print, publiſh, and vend, or cauſe to be printed, publiſhed, and vended, any Nautical Almanac or Almanacs, or other uſeful Table or Tables, which they, or the major Part of them, ſhall, from time to time, judge neceſſary and uſeful, in order to facilitate the Method of diſcovering the Longitude at Sea; any Law, Statute, excluſive Privilege, private Charter, or other Cuſtom, to the contrary thereof notwithſtanding.

And be it Enacted, by the Authority aforeſaid, That no Perſon or Perſons ſhall print, publiſh, or vend, or cauſe to be printed, publiſhed, or vended, any Nautical Almanac or Almanacs, or other Table or Tables conſtructed under the Direction of the ſaid Commiſſioners, without being firſt licenſed by the ſaid Commiſſioners, or the major Part of them: And if any Perſon or Perſons not ſo licenſed, or not being authorized by the Perſon or Perſons ſo licenſed by the ſaid Commiſſioners, ſhall print, publiſh, or vend, or cauſe to be printed, publiſhed, or vended, any ſuch Nautical Almanac or Almanacs, or other Table or Tables, every ſuch Perſon or Perſons ſhall, for every Copy of ſuch Nautical Almanac or Table ſo printed, publiſhed, or vended, forfeit and pay the Sum of Twenty Pounds; to be recovered by Action of Debt, Bill, Plaint, or Information, in any of his Majeſty's Courts of Record at *Weſtminſter*; and that One Moiety of ſuch Penalty and Forfeiture ſhall be to his Majeſty, his Heirs and Succeſſors, and the other Moiety to him or them that ſhall proſecute, inform, or ſue for the ſame.

EXTRACT from the late Act of Parliament concerning the Longitude, made in the Tenth Year of the Reign of his preſent Majeſty.

BE it Enacted by the KING's moſt Excellent Majeſty, by and with the Advice and Conſent of the Lords Spiritual and Temporal, and Commons, in this preſent Parliament aſſembled, and by the Authority of the ſame, That the ſaid Commiſſioners conſtituted by the ſaid ſeveral Acts beforementioned for the Diſcovery of the Longitude at Sea, and for examining, trying, and judging of all Propoſals, Experiments, and Improvements relating to the ſame, or any Five or more of them, ſhall have full Power to hear and receive any Propoſal or Propoſals that have been, or that ſhall hereafter be made to them for diſcovering the ſaid Longitude at Sea; or for improving the ſaid [Profeſſor Mayer's] Lunar Tables; or for making any other Diſcovery or Diſcoveries, Improvement or Improvements, uſeful to Navigation; and in caſe the ſaid Commiſſioners, or any Five or more of them, ſhall be ſo far ſatisfied of the Probability of any ſuch Propoſal, as to think it proper to make Experiment thereof, or of the Utility of ſuch Diſcovery or Improvement, as to think the ſame deſerving of Reward, they ſhall certify the ſame under their Hands and Seals to the Commiſſioners of the Navy for the Time being, together with the Names of the Perſon or Perſons who ſhall be the Author or Authors of ſuch Propoſal or Propoſals, or who ſhall make ſuch Diſcovery or Diſcoveries, Improvement or Improvements; and, upon producing ſuch Certificate, the ſaid Commiſſioners of the Navy are hereby authorized and required to make out a Bill or Bills for any ſuch Sum or Sums of Money, not exceeding in the Whole the Sum of Five thouſand Pounds, as the ſaid Commiſſioners for the Diſcovery of the ſaid Longitude, or any Five or more of them, ſhall think neceſſary for making any Experiments, or for giving any Reward or Rewards, Sum or Sums of Money, to ſuch Perſon or Perſons as ſhall improve the ſaid Lunar Tables, or ſhall make any Diſcovery or Diſcoveries, Improvement or Improvements uſeful to Navigation, in purſuance of this Act, or any of the ſaid Acts herein before-mentioned, payable by the Treaſurer of the Navy; which Sum or Sums of Money the Treaſurer of the Navy for the Time being is hereby authorized and required to pay immediately to the Perſon or Perſons mentioned in the ſaid Certificate or Certificates, out of any Money that ſhall be in his the ſaid Treaſurer's Hands unapplied for the Uſe of the Navy: Provided always, That if any ſuch Reward or Sum of Money ſhall exceed the Sum of One thouſand Pounds; then, and in that Caſe, the ſame ſhall be certified under the Hands and Seals of the major Part of the ſaid Commiſſioners for the Diſcovery of the ſaid Longitude.

By the COMMISSIONERS appointed by Acts of Parliament for the Diſcovery of the Longitude at Sea, and for examining, trying, and judging of all Propoſals, Experiments, and Improvements relating to the ſame.

WHEREAS we have employed proper Perſons to compute Nautical Almanacs and Aſtronomical Ephemerides for the Years 1773 and 1774, which will greatly contribute to make the Lunar Tables conſtructed by the late Profeſſor MAYER of *Gottingen* (which you have already printed with our Authority) more generally uſeful; and whereas we think fit to employ you to print the ſaid Nautical Almanacs and Aſtronomical Ephemerides: We do therefore, in purſuance of the Power veſted in us by Act of Parliament, hereby licenſe, authorize, and impower you to cauſe the ſame to be printed, together with ſuch other uſeful Tables for facilitating the Method of diſcovering the Longitude at Sea, as ſhall have been conſtructed under our Direction, and will be delivered to you by the Reverend Mr. NEVIL MASKELYNE, his Majeſty's Aſtronomer Royal at *Greenwich*; and for ſo doing this ſhall be your ſufficient Warrant. Given under our Hands and Seals the 2d Day of *March* 1771.

SANDWICH (L.S.)
FL. NORTON (L.S.)
T. GRIFFIN (L.S.)
J. FORBES (L.S.)
T. FRANKLAND (L.S.)
J. WEST (L.S.)
N. MASKELYNE (L.S.)
T. HORNSBY (L.S.)
J. SMITH (L.S.)
E. WARING (L.S.)
A. SHEPHERD (L.S.)
P. STEPHENS (L.S.)
H. PALLISSER (L.S.)
J. SMITH (L.S.)

To Mr. WILLIAM RICHARDSON, Printer in *Saliſbury-court, Fleet-ſtreet.*

By Order of the Commiſſioners,

JOHN IBBETSON, Secretary.

By the COMMISSIONERS appointed by Acts of Parliament for the Diſcovery of the Longitude at Sea, and for examining, trying, and judging of all Propoſals, Experiments, and Improvements relating to the ſame.

WHEREAS we think fit to employ you to publiſh and vend, and to cauſe to be publiſhed and vended, the Nautical Almanacs and Aſtronomical Ephemerides for the Years 1773 and 1774, together with other uſeful Tables (conſtructed under our Direction) for facilitating the Method of diſcovering the Longitude at Sea, which will be printed by Mr. WILLIAM RICHARDSON of *Saliſbury-court, Fleet-ſtreet:* We do therefore, in purſuance of the Power veſted in us by Act of Parliament, hereby licenſe, authorize, and impower you to publiſh and vend, and to cauſe to be publiſhed and vended, the ſaid Nautical Almanacs and Aſtronomical Ephemerides, together with the other uſeful Tables above-mentioned. For which this ſhall be your ſufficient Warrant. Given under our Hands and Seals the 2d Day of *March* 1771.

SANDWICH (L.S.)
FL. NORTON (L.S.)
T. GRIFFIN (L.S.)
J. FORBES (L.S.)
T. FRANKLAND (L.S.)
J. WEST (L.S.)
N. MASKELYNE (L.S.)
T. HORNSBY (L.S.)
J. SMITH (L.S.)
E. WARING (L.S.)
A. SHEPHERD (L.S.)
PH. STEPHENS (L.S.)
H. PALLISSER (L.S.)
J. SMITH (L.S.)

To Mr. JOHN NOURSE, Bookſeller in the *Strand*.

By Order of the Commiſſioners,
JOHN IBBETSON, Secretary.

☞ A Licence was alſo granted to the like Effect to Meſſ. JOHN MOUNT and THOMAS PAG, Stationers on *Tower-hill*.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Sa.	*Circumcision.*
2	*Su.*	*2d Sunday after Christmas.*
3	M.	
4	Tu.	
5	W.	
6	Th.	*Epiphany.*
7	F.	
8	Sa.	Lucian.
9	*Su.*	*1st Sunday after Epiphany.*
10	M.	
11	Tu.	
12	W.	
13	Th.	Hil. Camb. Ter. begins.
14	F.	Oxford Term begins.
15	Sa.	
16	*Su.*	*2d Sunday after Epiphany.*
17	M.	
18	Tu.	Q. Charlotte's birth-day
19	W.	[kept. Prisca.
20	Th.	Fabian. In 8 days of S.
21	F.	Agnes. [Hil. 1 ret.
22	Sa.	Vincent.
23	*Su.*	*3d Sunday after Epiphany.*
24	M.	Hilary Term begins.
25	Tu.	*Conversion of St. Paul.*
26	W.	
27	Th.	From S. Hil. in 15 days
28	F.	[2 ret.
29	Sa.	
30	*Su.*	*Septuages. Sund. K. Cha. I.*
31	M.	[*martyr'd.*

Phases of the Moon.

	D.	H.	M.
Last Quarter—	5.	5.	40
New Moon —	11.	20.	45
First Quarter—	19.	3.	11
Full Moon —	27.	6.	48

D. Other Phenomena.

1. ☾ ☌ ♌ $1^h.\ 33'.$
3. ☾ ☍ ♋ $4^h.\ 39'.$
   ☾ ☌ ♍ $14^h.\ 55'.$
4. ☾ ☌ ♍ $4^h.\ 55'.$
5. ☾ ☌ ♍ $4^h.\ 46'.$
   ♄ Stationary.
6. ☾ ☌ ♍ $8^h.\ 59'.$
7. ☾ ☌ ♎ $19^h.\ 31'.$
   ☾ ☌ ♎ $23^h.\ 13.$
8. ☾ ☌ ♎ $3^h.\ 19'.$
10. ☿ ☌ ♒ diff. Lat. $2'.$
14. ☾ ☌ ♒ $11^h.\ 47'.$
15. ☾ ☿ $10^h.\ 27'.$
17. ☾ ♃ $1^h.\ 24'.$
19. ☉ enters ♒ at $9^h.\ 19'.$
21. ☾ ☍ ♉ $21^h.\ 27'.$
    ☾ 1 ad ☌ ♉ $23^h.\ 37'.$
22. ☾ 2 ad ☌ ♉ $0^h.\ 8'.$
    ☾ ☌ ♉ Im. $4^h.\ 17'.$ * $2\frac{1}{2}'$ N. of ☽'s cent. Em. $5^h.\ 31'.$ * $0\frac{1}{2}'$ N.
28. ☾ ☍ ♑ $2^h.\ 42'.$
    ☾ ☌ ♑ $7^h.\ 36'.$
30. ☾ ☍ ♌ $10^h.\ 5'.$
    ☾ ☌ ♍ $20^h.\ 17'.$
31. ☾ ☌ ♏ $10^h.\ 13'.$

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. South.	Equat. of Time Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S	M. S.	S.
1	Sa.	9. 11. 15. 35	18. 48. 58,9	22. 59. 17	4.13,3	28,1
2	*Su.*	9. 12. 16. 45	18. 53. 23,6	22. 53. 54	4.41,4	27,7
3	M.	9. 13. 17. 55	18. 57. 47,9	22. 48. 3	5. 9,1	27,2
4	Tu.	9. 14. 19. 6	19. 2. 11,8	22. 41. 44	5.36,3	26,9
5	W.	9. 15. 20. 16	19. 6. 35,3	22. 35. 0	6. 3,2	26,5
6	Th.	9. 16. 21. 27	19. 10. 58,4	22. 27. 47	6.29,7	25,9
7	F.	9. 17. 22. 38	19. 15. 21,0	22. 20. 8	6.55,6	25,5
8	Sa.	9. 18. 23. 48	19. 19. 43,1	22. 12. 3	7.21,1	25,0
9	*Su.*	9. 19. 24. 59	19. 24. 4,7	22. 3. 32	7.46,1	24,4
10	M.	9. 20. 26. 9	19. 28. 25,7	21. 54. 35	8.10,5	23,9
11	Tu.	9. 21. 27. 20	19. 32. 46,2	21. 45. 12	8.34,4	23,2
12	W.	9. 22. 28. 30	19. 37. 6,1	21. 35. 24	8.57,6	22,6
13	Th.	9. 23. 29. 39	19. 41. 25,3	21. 25. 11	9.20,2	21,9
14	F.	9. 24. 30. 47	19. 45. 43,8	21. 14. 33	9.42,1	21,3
15	Sa.	9. 25. 31. 55	19. 50. 1,7	21. 3. 30	10. 3,4	20,6
16	*Su.*	9. 26. 33. 2	19. 54. 18,9	20. 52. 4	10.24,0	19,8
17	M.	9. 27. 34. 8	19. 58. 35,3	20. 40. 13	10.43,8	19,1
18	Tu.	9. 28. 35. 13	20. 2. 51,0	20. 28. 0	11. 2,9	18,3
19	W.	9. 29. 36. 17	20. 7. 5,9	20. 15. 23	11.21,2	17,5
20	Th.	10. 0. 37. 19	20. 11. 20,0	20. 2. 24	11.38,7	16,8
21	F.	10. 1. 38. 21	20. 15. 33,4	19. 49. 2	11.55,5	16,0
22	Sa.	10. 2. 39. 22	20. 19. 46,0	19. 35. 18	12.11,5	15,1
23	*Su.*	10. 3. 40. 21	20. 23. 57,7	19. 21. 13	12.26,6	14,3
24	M.	10. 4. 41. 19	20. 28. 8,7	19. 6. 46	12.40,9	13,5
25	Tu.	10. 5. 42. 16	20. 32. 18,8	18. 51. 58	12.54,4	12,7
26	W.	10. 6. 43. 11	20. 36. 28,0	18. 36. 50	13. 7,1	11,9
27	Th.	10. 7. 44. 6	20. 40. 36,5	18. 21. 22	13.19,0	11,1
28	F.	10. 8. 44. 59	20. 44. 44,2	18. 5. 34	13.30,1	10,2
29	Sa.	10. 9. 45. 52	20. 48. 51,0	17. 49. 26	13.40,3	9,5
30	*Su.*	10. 10. 46. 44	20. 52. 57,0	17. 33. 0	13 49,8	8,6
31	M.	10. 11. 47. 34	20. 57. 2,2	17. 16. 14	13.58,4	7,8

Days of the Month.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 19,2	1. 10,9	2. 32,9	9. 992633	5. 26. 4
7	16. 19,1	1. 10,6	2. 32,8	9. 992725	5. 25. 45
13	16. 18,8	1. 10,1	2. 32,8	9. 992885	5. 25. 26
19	16. 18,2	1. 9,5	2. 32,6	9. 993102	5. 25. 6
25	16. 17,5	1. 8,9	2. 32,3	9. 993391	5. 24. 47

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Emerſions.		II. Satellite. Emerſions.		III. Satellite.		
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.	
2	9*33. 39	3	1. 7. 47	6	0. 15. 0	I
4	4. 1. 49	6	14. 24. 19	6	2. 28. 38	E
5	22. 30. 1	10	3. 40. 57	13	4. 15. 15	I
7	16. 58. 13	13	16. 57. 37	13	6*27. 27	E
9	11. 26. 28	17	6*14. 29	20	8*16. 9	I
11	5*54. 46	20	19. 31. 28	20	10. 26. 57	E
13	0. 23. 3	24	8*48. 33	27	12. 17. 37	I
14	18. 51. 26	27	22. 5. 51	27	14. 27. 1	E
16	13. 19. 50	31	11. 23. 10			
18	7*48. 15			IV. Satellite.		Conj.
20	2. 16. 41					
21	20. 45. 10			6	14. 14	Inf.
23	15. 13. 40			14	23. 20	Sup.
25	9. 42. 15			23	8*27	Inf.
27	4. 10. 51			31	17. 34	Sup.
28	22. 39. 32					
30	17. 8. 12					

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Gr. Elong. 11d.						
1	5. 3. 35	6. 39 N	8. 21. 7	2. 54 N	20. 16 S	22. 32
7	5. 29. 22	5. 5	8. 24. 5	2. 7	21. 13	22. 19
13	6. 20. 58	2. 57	8. 29. 52	1. 11	22. 17	22. 19
19	7. 9. 50	0. 44 N	9. 7. 8	0. 17 N	22. 59	22. 25
25	7. 27. 6	1. 22 S	9. 15. 16	0. 31 S	23. 6	22. 35
VENUS. Gr. Elong. 10d.						
1	1. 21. 48	1. 19 S	10. 28. 8	1. 16 S	13. 19 S	3. 14
7	2. 1. 27	0. 46	11. 4. 29	0. 47	10. 37	3. 11
13	2. 11. 7	0. 11 S	11. 10. 34	0. 12 S	7. 47	3. 7
19	2. 20. 48	0. 22 N	11. 16. 26	0. 26 N	4. 58	3. 2
25	3. 0. 30	0. 56	11. 21. 56	1. 10	2. 8	2. 56
MARS. ♂ 20d. 15¾h.						
1	9. 19. 41	1. 38 S	9. 16. 14	0. 58 S	23. 26 S	0. 22
7	9. 23. 21	1. 41	9. 20. 53	0. 59	22. 49	0. 16
13	9. 27. 1	1. 44	9. 25. 34	1. 1	22. 3	0. 10
19	10. 0. 44	1. 46	10. 0. 16	1. 2	21. 8	0. 4
25	10. 4. 27	1. 48	10. 4. 58	1. 3	20. 4	23. 58
JUPITER.						
1	0. 13. 7	1. 19 S	0. 1. 49	1. 18 S	0. 28 S	5. 19
7	0. 13. 40	1. 19	0. 2. 35	1. 16	0. 8 S	4. 55
13	0. 14. 13	1. 19	0. 3. 27	1. 15	0. 14 N	4. 33
19	0. 14. 46	1. 19	0. 4. 24	1. 14	0. 38	4. 10
25	0. 15. 19	1. 19	0. 5. 25	1. 12	1. 3	3. 49
SATURN.						
1	5. 20. 22	2. 9 N	5. 26. 10	2. 13 N	3. 33 N	16. 57
7	5. 20. 35	2. 9	5. 26. 10	2. 15	3. 35	16. 31
13	5. 20. 48	2. 9	5. 26. 7	2. 16	3. 38	16. 5
19	5. 21. 0	2. 9	5. 25. 59	2. 18	3. 42	15. 39
25	5. 21. 12	2. 10	5. 25. 48	2. 20	3. 48	15. 13

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Sa.	4. 20. 17. 32	4. 26. 35. 51	2. 52. 13 S	2. 23. 52 S
2	*Su.*	5. 2. 57. 0	5. 9. 21. 22	1. 53. 29	1. 21. 22
3	M.	5. 15. 49. 9	5. 22. 20. 46	0. 47. 53 S	0. 13. 26 S
4	Tu.	5. 28. 56. 32	6. 5. 36. 44	0. 21. 37 N	0. 56. 47 N
5	W.	6. 12. 21. 42	6. 19. 11. 49	1. 31. 35	2. 5. 31
6	Th.	6. 26. 7. 8	7. 3. 7. 52	2. 38. 3	3. 8. 35
7	F.	7. 10. 14. 3	7. 17. 25. 24	3. 36. 38	4. 1. 33
8	Sa.	7. 24. 41. 46	8. 2. 2. 40	4. 22. 55	4. 40. 6
9	*Su.*	8. 9. 27. 27	8. 16. 55. 14	4. 52. 46	5. 0. 31
10	M.	8. 24. 25. 3	9. 1. 55. 40	5. 3. 11	5. 0. 35
11	Tu.	9. 9. 25. 59	9. 16. 54. 43	4. 52. 49	4. 40. 3
12	W.	9. 24. 20. 36	10. 1. 42. 36	4. 22. 33	4. 0. 48
13	Th.	10. 8. 59. 41	10. 16. 10. 54	3. 35. 20	3. 6. 45
14	F.	10. 23. 15. 47	11. 0. 13. 54	2. 35. 35	2. 2. 31
15	Sa.	11. 7. 5. 6	11. 13. 49. 12	1. 28. 9	0. 53. 11 N
16	*Su.*	11. 20. 26. 26	11. 26. 57. 4	0. 18. 1 N	0. 16. 58 S
17	M.	0. 3. 21. 35	0. 9. 40. 20	0. 51. 7 S	1. 24. 10
18	Tu.	0. 15. 54. 1	0. 22. 3. 5	1. 55. 47	2. 25. 37
19	W.	0. 28. 8. 19	1. 4. 10. 20	2. 53. 33	3. 19. 13
20	Th.	1. 10. 9. 45	1. 16. 7. 13	3. 42. 32	4. 3. 18
21	F.	1. 22. 3. 26	1. 27. 58. 54	4. 21. 23	4. 36. 34
22	Sa.	2. 3. 54. 13	2. 9. 49. 53	4. 48. 46	4. 57. 52
23	*Su.*	2. 15. 46. 29	2. 21. 44. 15	5. 3. 48	5. 6. 26
24	M.	2. 27. 43. 40	3. 3. 45. 8	5. 5. 45	5. 1. 39
25	Tu.	3. 9. 48. 40	3. 15. 54. 38	4. 54. 8	4. 43. 15
26	W.	3. 22. 3. 4	3. 28. 14. 15	4. 28. 57	4. 11. 27
27	Th.	4. 4. 28. 7	4. 10. 44. 47	3. 50. 44	3. 27. 6
28	F.	4. 17. 4. 16	4. 23. 26. 32	3. 0. 42	2. 31. 50
29	Sa.	4. 29. 51. 34	5. 6. 19. 30	2. 0. 45	1. 27. 51
30	*Su.*	5. 12. 50. 16	5. 19. 23. 55	0. 53. 32 S	0. 18. 13 S
31	M.	5. 26. 0. 30	6. 2. 40. 3	0. 17. 40 N	0. 53. 35 N

JANUARY 1774.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſcen. at Midn.	☽'s Declinat. at Noon.	☽'s Declinat. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Sa.	20	15. 7	141. 46	148. 0	11. 59 N	10. 25 N
2	*Su.*	21	15. 53	154. 13	160. 25	8. 40	6. 49
3	M.	22	16. 40	166. 39	172. 53	4. 52	2. 50 N
4	Tu.	23	17. 29	179. 10	185. 37	0. 45 N	1. 22 S
5	W.	24	18. 19	191. 58	198. 31	3. 29 S	5. 35
6	Th.	25	19. 11	205. 11	212. 0	7. 39	9. 37
7	F.	26	20. 5	218. 58	226. 7	11. 29	13. 11
8	Sa.	27	21. 3	233. 26	240. 55	14. 43	16. 1
9	*Su.*	28	22. 4	248. 33	256. 18	17. 4	17. 50
10	M.	29	23. 5	264. 9	272. 1	18. 18	18. 27
11	Tu.	1	♂	279. 53	287. 43	18. 16	17. 46
12	W.	2	0. 5	295. 27	303. 2	16. 58	15. 53
13	Th.	3	1. 3	310. 27	317. 41	14. 34	13. 2
14	F.	4	1. 57	324. 44	331. 35	11. 20	9. 29
15	Sa.	5	2. 48	338. 15	344. 45	7. 33	5. 33
16	*Su.*	6	3. 37	351. 6	357. 19	3. 31 S	1. 28 S
17	M.	7	4. 23	3. 25	9. 26	0. 33 N	2. 33 N
18	Tu.	8	5. 8	15. 24	21. 18	4. 29	6. 20
19	W.	9	5. 52	27. 11	33. 3	8. 7	9. 48
20	Th.	10	6. 36	38. 56	44. 51	11. 21	12. 47
21	F.	11	7. 21	50. 47	56. 47	14. 5	15. 14
22	Sa.	12	8. 7	62. 50	68. 57	16. 13	17. 2
23	*Su.*	13	8. 54	75. 7	81. 20	17. 40	18. 7
24	M.	14	9. 42	87. 37	93. 56	18. 21	18. 23
25	Tu.	15	10. 30	100. 18	106. 41	18. 12	17. 50
26	W.	16	11. 18	113. 5	119. 28	17. 14	16. 26
27	Th.	17	12. 6	125. 51	132. 14	15. 26	14. 14
28	F.	18	12. 54	138. 35	144. 55	12. 52	11. 20
29	Sa.	19	13. 42	151. 15	157. 33	9. 39	7. 50
30	*Su.*	20	14. 30	163. 50	170. 8	5. 55	3. 55 N
31	M.	21	15. 18	176. 27	182. 49	1. 51	0. 14 S

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Mid.
		M. S.	M. S.	M. S.	M. S.		
1	Sa.	15. 14	15. 18	55. 54	56. 9	5079	5059
2	*Su.*	15. 23	15. 27	56. 26	56. 43	5037	5015
3	M.	15. 32	15. 37	57. 1	57. 20	4992	4968
4	Tu.	15. 43	15. 48	57. 40	58. 1	4943	4917
5	W.	15. 54	16. 0	58. 21	58. 42	4892	4866
6	Th.	16. 5	16. 11	59. 3	59. 23	4841	4816
7	F.	16. 16	16. 21	59. 42	60. 0	4793	4771
8	Sa.	16. 25	16. 29	60. 16	60. 29	4752	4736
9	*Su.*	16. 32	16. 34	60. 40	60. 47	4723	4715
10	M.	16. 35	16. 35	60. 51	60. 50	4710	4711
11	Tu.	16. 34	16. 31	60. 46	60. 38	4716	4725
12	W.	16. 28	16. 24	60. 25	60. 9	4741	4760
13	Th.	16. 18	16. 12	59. 50	59. 27	4783	4811
14	F.	16. 5	15. 59	59. 3	58. 37	4841	4872
15	Sa.	15. 51	15. 44	58. 10	57. 43	4906	4940
16	*Su.*	15. 36	15. 29	57. 16	56. 50	4973	5006
17	M.	15. 22	15. 16	56. 25	56. 2	5038	5068
18	Tu.	15. 10	15. 5	55. 41	55. 22	5095	5120
19	W.	15. 1	14. 57	55. 5	54. 51	5142	5161
20	Th.	14. 54	14. 51	54. 39	54. 30	5177	5189
21	F.	14. 50	14. 48	54. 23	54. 19	5198	5203
22	Sa.	14. 48	14. 48	54. 17	54. 17	5206	5206
23	*Su.*	14. 48	14. 49	54. 20	54. 24	5202	5197
24	M.	14. 51	14. 53	54. 31	54. 38	5187	5178
25	Tu.	14. 56	14. 59	54. 48	54. 58	5165	5152
26	W.	15. 2	15. 6	55. 10	55. 23	5136	5119
27	Th.	15. 9	15. 13	55. 36	55. 50	5102	5084
28	F.	15. 17	15. 21	56. 5	56. 20	5064	5045
29	Sa.	15. 25	15. 29	56. 35	56. 50	5026	5006
30	*Su.*	15. 33	15. 37	57. 5	57. 19	4987	4970
31	M.	15. 41	15. 45	57. 34	57. 48	4951	4933

Distances of ☽'s Center from ☉, and from Stars east of her.

Days	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		60. 20. 26	58. 46. 18	57. 12. 0	55. 37. 32
2	Spica ♍	47. 42. 33	46. 6. 59	44. 31. 13	42. 55. 16
3		34. 52. 47	33. 15. 45	31. 38. 33	30. 1. 10
4	Antares.	67. 46. 1	66. 7. 35	64. 28. 55	62. 50. 1
5		54. 32. 5	52. 51. 50	51. 11. 23	49. 30. 43
3		117. 28. 36	115. 58. 47	114. 28. 42	112. 58. 21
4		105. 22. 32	103. 50. 33	102. 18. 16	100. 45. 43
5		92. 58. 30	91. 24. 8	89. 49. 28	88. 14. 29
6	The Sun.	80. 14. 55	78. 38. 4	77. 0. 55	75. 23. 27
7		67. 11. 27	65. 32. 10	63. 52. 36	62. 12. 45
8		53. 49. 25	52. 7. 59	50. 26. 20	48. 44. 28
9		40. 12. 21			
13		84. 57. 50	83. 12. 20	81. 27. 14	79. 42. 30
14		71. 4. 50	69. 22. 37	67. 40. 53	65. 59. 38
15	α Arietis.	57. 40. 52	56. 2. 44	54. 25. 10	52. 48. 11
16		44. 52. 34	43. 19. 26	41. 47. 0	40. 15. 21
17		32. 49. 40			
17		63. 19. 12	61. 45. 40	60. 8. 28	58. 33. 37
18	Aldeba-	50. 44. 17	49. 11. 22	47. 38. 44	46. 6. 23
19	ran.	38. 28. 27	36. 57. 34	35. 26. 53	33. 56. 24
20		26. 26. 42	24. 57. 14	23. 27. 53	21. 58. 40
21		58. 59. 9	57. 32. 46	56. 6. 31	54. 40. 24
22	Pollux.	47. 31. 38	46. 6. 16	44. 41. 3	43. 15. 59
23		36. 13. 19			
23		71. 2. 29	69. 33. 38	68. 4. 43	66. 35. 42
24		59. 9. 8	57. 39. 27	56. 9. 39	54. 39. 43
25	Regulus.	47. 8. 7	45. 37. 21	44. 6. 26	42. 35. 22
26		34. 57. 44	33. 25. 43	31. 53. 32	30. 21. 12
27		22. 37. 27			
27		76. 7. 24	74. 33. 50	73. 0. 4	71. 26. 7
28		63. 33. 31	61. 58. 26	60. 23. 11	58. 47. 44
29	Spica ♍	50. 47. 55	49. 11. 25	47. 34. 45	45. 57. 55
30		37. 51. 29	36. 13. 47	34. 35. 57	32. 58. 1
31		24. 47. 20			
31	Antares.	70. 41. 13	69. 2. 48	67. 24. 13	65. 45. 29
F. 1		57. 29. 45			

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		54. 2. 54	52. 28. 5	50. 53. 6	49. 17. 55
2	Spica ♍	41. 19. 8	39. 42. 49	38. 6. 19	36. 29. 38
3		28. 23. 37			
3		74. 17. 25	72. 39. 55	71. 2. 11	69. 24. 13
4	Antares.	61. 10. 53	59. 31. 31	57. 51. 56	56. 12. 7
5		47. 49. 50			
2				120. 27. 28	118. 58. 10
3		111. 27. 44	109. 56. 51	108. 25. 41	106. 54. 15
4		99. 12. 52	97. 39. 44	96. 6. 17	94. 32. 33
5	The Sun.	86. 39. 11	85. 3. 35	83. 27. 40	81. 51. 27
6		73. 45. 40	72. 7. 34	70. 29. 10	68. 50. 28
7		60. 32. 37	58. 52. 12	57. 11. 32	55. 30. 36
8		47. 2. 23	45. 20. 7	43. 37. 41	41. 55. 6
13		77. 58. 8	76. 14. 10	74. 30. 38	72. 47. 31
14	α Arietis.	64. 18. 51	62. 38. 34	60. 58. 48	59. 19. 34
15		51. 11. 49	49. 36. 3	48. 0. 53	46. 26. 23
16		38. 44. 29	37. 14. 27	35. 45. 17	34. 17. 1
17		56. 59. 6	55. 24. 55	53. 51. 4	52. 17. 31
18	Aldeba-	44. 34. 19	43. 2. 29	41. 30. 54	39. 59. 33
19	ran.	32. 26. 7	30. 56. 1	29. 26. 5	27. 56. 19
20		20. 29. 34			
20		64. 46. 3	63. 19. 7	61. 52. 19	60. 25. 40
21	Pollux.	53. 14. 24	51. 48. 31	50. 22. 45	48. 57. 8
22		41. 51. 5	40. 26. 21	39. 1. 49	37. 37. 28
23		65. 6. 36	63. 37. 24	62. 8. 5	60. 38. 40
24	Regulus.	53. 9. 39	51. 39. 29	50. 9. 10	48. 38. 43
25		41. 4. 8	39. 32. 46	38. 1. 15	36. 29. 34
26		28. 48. 43	27. 16. 6	25. 43. 21	24. 10. 28
27		69. 51. 58	68. 17. 38	66. 43. 7	65. 8. 24
28	Spica ♍	57. 12. 7	55. 36. 20	54. 0. 22	52. 24. 14
29		44. 20. 55	42. 43. 46	41. 6. 29	39. 29. 3
30		31. 20. 0	29. 41. 54	28. 3. 46	26. 25. 34
31	Antares.	64. 6. 35	62. 27. 33	60. 48. 24	59. 9. 8

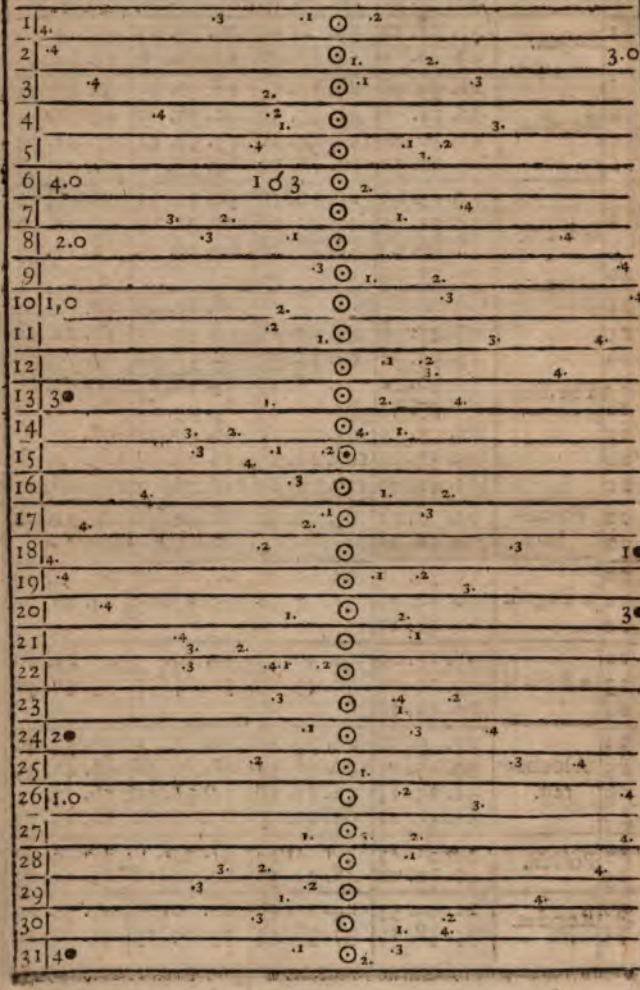
Distances of ☽'s Center from ☉, and from Stars west of her.

Days.	Stars Names.	Noon. D. M. S.	3 Hours. D. M. S.	6 Hours. D. M. S.	9 Hours. D. M. S.
1		31. 36. 22	33. 4. 26	34. 33. 6	36. 2. 22
2	Pollux.	43. 36. 40	45. 8. 56	46. 41. 35	48. 14. 38
3		56. 5. 28			
3		19. 9. 57	20. 46. 50	22. 24. 5	24. 1. 41
4		32. 14. 51	33. 54. 27	35. 34. 22	37. 14. 35
5	Regulus.	45. 40. 20	47. 22. 28	49. 4. 55	50. 47. 41
6		59. 26. 15	61. 10. 56	62. 55. 56	64. 41. 15
7		73. 32. 41			
7		20. 20. 4	22. 5. 11	23. 50. 52	25. 37. 4
8	Spica ♍	34. 34. 55	36. 23. 37	38. 12. 38	40. 1. 58
9		49. 12. 35	51. 3. 23	52. 54. 23	54. 45. 33
10		64. 3. 18	65. 55. 6	67. 46. 57	69. 38. 50
15		41. 34. 28	43. 8. 13	44. 41. 35	46. 14. 33
16		53. 53. 28	55. 24. 3	56. 54. 15	58. 24. 5
17		65. 47. 38	67. 15. 14	68. 42. 30	70. 9. 25
18	The Sun.	77. 19. 16	78. 44. 18	80. 9. 3	81. 33. 32
19		88. 32. 9	89. 55. 12	91. 18. 3	92. 40. 42
20		99. 31. 15	100. 52. 53	102. 14. 24	103. 35. 48
21		110. 21. 24	111. 42. 18	113. 3. 8	114. 23. 56
22		121. 7. 31			
19	Fomal-	58. 43. 4	60. 4. 3	61. 25. 6	62. 46. 14
20	haut.	69. 32. 40	70. 54. 4	72. 15. 28	73. 36. 54
21		65. 8. 47	66. 31. 41	67. 54. 39	69. 17. 40
22	α Pegasi.	76. 13. 57	77. 37. 25	79. 0. 58	80. 24. 35
23		43. 46. 11	45. 10. 14	46. 34. 35	47. 59. 15
24	α Arietis.	55. 6. 42	56. 32. 59	57. 59. 30	59. 26. 16
25		33. 2. 27	34. 33. 24	36. 4. 31	37. 35. 48
26	Aldeba-	45. 14. 43	46. 47. 3	48. 19. 35	49. 52. 18
27	ran.	57. 38. 43	59. 12. 35	60. 46. 39	62. 20. 54
28		70. 15. 7			
28		28. 36. 16	30. 3. 55	31. 32. 21	33. 1. 32
29	Pollux.	40. 37. 2	42. 9. 42	43. 42. 49	45. 16. 22
30		53. 9. 32			
30		16. 11. 49	17. 49. 5	19. 26. 41	21. 4. 37
31	Regulus.	29. 18. 43	30. 58. 16	32. 38. 3	34. 18. 3
F. 1		42. 41. 17			

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Pollux.	37. 32. 12	39. 2. 34	40. 33. 27	42. 4. 50
2		49. 48. 6	51. 21. 56	52. 56. 6	54. 30. 37
3	Regulus.	25. 39. 39	27. 17. 57	28. 56. 35	30. 35. 33
4		38. 55. 6	40. 35. 56	42. 17. 5	43. 58. 33
5		52. 30. 46	54. 14. 10	55. 57. 52	57. 41. 54
6		66. 26. 54	68. 12. 52	69. 59. 9	71. 45. 46
7	Spica ♍	27. 23. 46	29. 10. 56	30. 58. 32	32. 46. 32
8		41. 51. 35	43. 41. 28	45. 31. 37	47. 22. 0
9		56. 36. 51	58. 28. 18	60. 19. 53	62. 11. 33
10		71. 30. 44			
14	The Sun.			38. 25. 49	40. 0. 20
15		47. 47. 8	49. 19. 18	50. 51. 5	52. 22. 28
16		59. 53. 31	61. 22. 35	62. 51. 18	64. 19. 39
17		71. 36. 0	73. 2. 17	74. 28. 15	75. 53. 55
18		82. 57. 44	84. 21. 41	85. 45. 24	87. 8. 53
19		94. 3. 9	95. 25. 25	96. 47. 31	98. 9. 28
20		104. 57. 5	106. 18. 17	107. 39. 24	109. 0. 26
21		115. 44. 41	117. 5. 24	118. 26. 7	119. 46. 49
19	Fomalhaut.	64. 7. 25	65. 28. 40	66. 49. 58	68. 11. 18
20		74. 58. 19			
20	α Pegaſi.	59. 38. 2	61. 0. 36	62. 23. 15	63. 45. 59
21		70. 40. 47	72. 3. 58	73. 27. 13	74. 50. 33
22		81. 48. 17			
22	α Arietis.	38. 13. 29	39. 36. 7	40. 59. 7	42. 22. 28
23		49. 24. 12	50. 49. 25	52. 14. 55	53. 40. 40
24		60. 53. 16			
24	Aldebaran.	27. 0. 17	28. 30. 35	30. 1. 2	31. 31. 40
25		39. 7. 15	40. 38. 51	42. 10. 38	43. 42. 35
26		51. 25. 13	52. 58. 18	54. 31. 35	56. 5. 3
27		63. 55. 21	65. 30. 0	67. 4. 50	68. 39. 53
28	Pollux.	34. 31. 25	36. 1. 57	37. 33. 6	39. 4. 49
29		46. 50. 18	48. 24. 37	49. 59. 16	51. 34. 15
30	Regulus.	22. 42. 53	24. 21. 26	26. 0. 16	27. 39. 22
31		35. 58. 17	37. 38. 44	39. 19. 23	41. 0. 14

Configurations of the SATELLITES of JUPITER at 6 o' th' Clock in the Evening.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	
2	W.	*Purification of V. Mary.*
3	Th.	Blas. On mor. of Purif.
4	F.	[3 ret.
5	Sa.	Agatha.
6	*Su.*	*Sexageſima-Sunday.*
7	M.	
8	Tu.	
9	W.	
10	Th.	In 8 days of Purif. 4 ret.
11	F.	
12	Sa.	Hilary Term ends.
13	*Su.*	*Quinquageſima, or Shrove-*
14	M.	Valentine. [*Sunday.*
15	Tu.	
16	W.	*Aſh-Wedneſday.*
17	Th.	
18	F.	
19	Sa.	
20	*Su.*	*1ſt Sunday in Lent.*
21	M.	
22	Tu.	
23	W.	
24	Th.	*St. Matthias.*
25	F.	
26	Sa.	
27	*Su.*	*2d Sunday in Lent.*
28	M.	

Phaſes of the Moon.

	D.	H.	M.
Laſt Quarter —	3.	14.	56
New Moon —	10.	8.	39
Firſt Quarter—	17.	23.	55
Full Moon —	25.	22.	30

Other Phenomena.

D.

1. ☾ ☌ ♍ 10^h. 8′.
2. ☾ ☍ ♍ 14^h. 35′.
4. ☾ ☌ ♎ 2^h. 2′.
   ☾ ☍ ♑ 5^h. 49′.
   ☾ ☌ ♑ 10^h. 5′.
8. ☾ ☌ ♒ 20^h. 39′.
13. ☾ ☍ ♉ 20^h. 29′.
18. ☉ enters ♓ at 0^h. 12′.
   ☾ ☌ ☿ 5^h. 18′.
   ☾ 1 ad ☽ ☿ 7^h. 27′.
   ☾ 2 ad ☽ ☿ 7^h. 58′.
   ☾ ☍ ☿ 13^h. 22′.
24. ☾ ☌ ♌ 10^h. 40′.
   ☾ ☍ ♌ Im. 15^h. 53′. *
   $13\frac{1}{2}$′ S. of ☽'s cent.
   Em. 16^h. 22′. *
   14′ S.
26. ☾ ☌ ♌ 17^h. 12′.
27. ☾ ☌ ♍ 3^h. 10′.
   ☾ ☍ ♐ 16^h. 50′.
28. ☾ ☌ ♍ 16^h. 14′.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. South.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Tu.	10. 12. 48. 23	21. 1. 6,5	16.59.11	14. 6,2	7,0
2	W.	10. 13. 49. 11	21. 5. 10,1	16.41.50	14. 13,2	6,2
3	Th.	10. 14. 49. 59	21. 9. 12,9	16.24.11	14. 19,4	5,4
4	F.	10. 15. 50. 46	21. 13. 14,8	16. 6.15	14. 24,8	4,6
5	Sa.	10. 16. 51. 32	21. 17. 16,0	15.48. 2	14. 29,4	3,8
6	*Su.*	10. 17. 52. 17	21. 21. 16,4	15.29.33	14. 33,2	3,1
7	M.	10. 18. 53. 1	21. 25. 16,0	15.10.49	14. 36,3	2,2
8	Tu.	10. 19. 53. 44	21. 29. 14,9	14.51.49	14. 38,5	1,5
9	W.	10. 20. 54. 26	21. 33. 12,9	14.32.34	14. 40,0	0,7
10	Th.	10. 21. 55. 6	21. 37. 10,1	14.13. 4	14. 40,7	0,1
11	F.	10. 22. 55. 45	21. 41. 6,6	13.53.20	14. 40,6	0,8
12	Sa.	10. 23. 56. 22	21. 45. 2,3	13.33.22	14. 39,8	1,6
13	*Su.*	10. 24. 56. 58	21. 48. 57,2	13.13.12	14. 38,2	2,4
14	M.	10. 25. 57. 31	21. 52. 51,3	12.52.49	14. 35,8	3,2
15	Tu.	10. 26. 58. 3	21. 56. 44,7	12.32.13	14. 32,6	3,9
16	W.	10. 27. 58. 33	22. 0. 37,4	12.11.25	14. 28,7	4,6
17	Th.	10. 28. 59. 2	22. 4. 29,4	11.50.26	14. 24,1	5,3
18	F.	10. 29. 59. 28	22. 8. 20,6	11.29.16	14. 18,8	6,0
19	Sa.	11. 0. 59. 52	22. 12. 11,1	11. 7.55	14. 12,8	6,8
20	*Su.*	11. 2. 0. 14	22. 16. 0,9	10.46.24	14. 6,0	7,4
21	M.	11. 3. 0. 35	22. 19. 50,0	10.24.42	13. 58,6	8,0
22	Tu.	11. 4. 0. 53	22. 23. 38,5	10. 2.52	13. 50,6	8,7
23	W.	11. 5. 1. 9	22. 27. 26,3	9.40.53	13. 41,9	9,4
24	Th.	11. 6. 1. 23	22. 31. 13,5	9.18.45	13. 32,5	10,0
25	F.	11. 7. 1. 35	22. 35. 0,1	8.56.29	13. 22,5	10,5
26	Sa.	11. 8. 1. 45	22. 38. 46,1	8.34. 5	13. 12,0	11,0
27	*Su.*	11. 9. 1. 54	22. 42. 31,5	8.11.33	13. 1,0	11,6
28	M.	11. 10. 2. 1	22. 46. 16,4	7.48.54	12. 49,4	12,1

Days.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 16,5	1. 8,1	2. 32,1	9. 993848	5. 24. 25
7	16. 15,5	1. 7,4	2. 31,8	9. 994329	5. 24. 6
13	16. 14,3	1. 6,7	2. 31,4	9. 994850	5. 23. 47
19	16. 13,0	1. 6,1	2. 31,0	9. 995406	5. 23. 28
25	16. 11,6	1. 5,6	2. 30,5	9. 996015	5. 23. 9

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Emerſions.		II. Satellite. Emerſions.		III. Satellite.	
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.
1	11. 36. 57	4	0. 40. 33	3	16. 19. 44 I
3	6* 5. 44	7	13. 58. 11	3	18. 27. 46 E
5	0. 34. 33	11	3. 15. 57	10	20. 22. 34 I
6	19. 3. 26	14	16. 33. 51	10	22. 29. 8 E
8	13. 32. 19	18	5*51. 55	18	0. 25. 54 I
10	8* 1. 16	21	19. 10. 5	18	2. 31. 8 E
12	2. 30. 13	25	8. 28. 24	25	4. 29. 43 I
13	20. 59. 14	28	21. 46. 48	25	6*33. 38 E
15	15. 28. 15				
17	9. 57. 22			IV. Satellite. Conj.	
19	4. 26. 27				
20	22. 55. 36			9	2. 43 Inf.
22	17. 24. 45			17	11. 52 Sup.
24	11. 53. 58			25	21. 2 Inf.
26	6*23. 10				
28	0. 52. 23				

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſ. over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Sup. ☌ 26d 9½h.						
1	8. 16. 23	3. 34 S	9. 25. 28	1. 17 S	22. 20 S	22. 52
7	9. 3. 5	5. 9	10. 4. 46	1. 45	20. 48	23. 8
13	9. 20. 43	6. 20	10. 14. 33	2. 2	18. 26	23. 25
19	10. 10. 11	6. 56	10. 24. 52	2. 5	15. 13	23. 42
25	11. 2. 34	6. 42	11. 5. 46	1. 53	11. 9	0. 1
VENUS.						
1	3. 11. 50	1. 33 N	11. 27. 49	2. 8 N	1. 6 N	2. 48
7	3. 21. 34	2. 3	0. 2. 14	3. 3	3. 42	2. 38
13	4. 1. 19	2. 28	0. 5. 59	4. 2	6. 5	2. 26
19	4. 11. 4	2. 49	0. 8. 49	5. 3	8. 9	2. 13
25	4. 20. 49	3. 6	0. 10. 36	6. 7	9. 50	1. 54
MARS.						
1	10. 8. 49	1. 50 S	10. 10. 28	1. 4 S	18. 41 S	23. 52
7	10. 12. 34	1. 50	10. 15. 13	1. 5	17. 21	23. 47
13	10. 16. 21	1. 51	10. 19. 56	1. 5	15. 53	23. 42
19	10. 20. 9	1. 51	10. 24. 40	1. 5	14. 20	23. 37
25	10. 23. 57	1. 50	10. 29. 23	1. 5	12. 43	23. 32
JUPITER.						
1	0. 15. 58	1. 19 S	0. 6. 42	1. 11 S	1. 34 N	3. 25
7	0. 16. 31	1. 18	0. 7. 52	1. 10	2. 3	3. 5
13	0. 17. 4	1. 18	0. 9. 4	1. 9	2. 33	2. 46
19	0. 17. 37	1. 18	0. 10. 20	1. 8	3. 3	2. 28
25	0. 18. 10	1. 18	0. 11. 38	1. 7	3. 35	2. 9
SATURN.						
1	5. 21. 27	2. 10 N	5. 25. 31	2. 21 N	3. 56 N	14. 44
7	5. 21. 39	2. 10	5. 25. 12	2. 22	4. 5	14. 19
13	5. 21. 51	2. 11	5. 24. 51	2. 24	4. 15	13. 54
19	5. 22. 3	2. 11	5. 24. 27	2. 25	4. 25	13. 29
25	5. 22. 16	2. 11	5. 24. 2	2. 26	4. 36	13. 5

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Tu.	6. 9. 22. 44	6. 16. 8. 27	1. 29. 5 N	2. 3. 38 N
2	W.	6. 22. 57. 34	6. 29. 49. 51	2. 36. 42	3. 7. 49
3	Th.	7. 6. 45. 28	7. 13. 44. 26	3. 36. 24	4. 2. 2
4	F.	7. 20. 46. 35	7. 27. 51. 54	4. 24. 14	4. 42. 32
5	Sa.	8. 5. 0. 7	8. 12. 10. 57	4. 56. 37	5. 6. 8
6	*Su.*	8. 19. 23. 58	8. 26. 38. 44	5. 10. 51	5. 10. 38
7	M.	9. 3. 54. 37	9. 11. 10. 56	5. 5. 27	4. 55. 21
8	Tu.	9. 18. 26. 57	9. 25. 41. 54	4. 40. 29	4. 21. 7
9	W.	10. 2. 54. 53	10. 10. 5. 10	3. 57. 40	3. 30. 34
10	Th.	10. 17. 12. 4	10. 24. 14. 51	3. 0. 24	2. 27. 42
11	F.	11. 1. 12. 55	11. 8. 5. 55	1. 53. 7	1. 17. 14
12	Sa.	11. 14. 53. 29	11. 21. 35. 25	0. 40. 46 N	0. 4. 5 N
13	*Su.*	11. 28. 11. 40	0. 4. 42. 21	0. 32. 7 S	1. 7. 25 S
14	M.	0. 11. 7. 36	0. 17. 27. 34	1. 41. 22	2. 13. 38
15	Tu.	0. 23. 42. 51	0. 29. 53. 46	2. 43. 55	3. 11. 53
16	W.	1. 6. 0. 50	1. 12. 4. 31	3. 37. 23	4. 0. 12
17	Th.	1. 18. 5. 26	1. 24. 4. 16	4. 20. 12	4. 37. 14
18	F.	2. 0. 1. 27	2. 5. 57. 46	4. 51. 12	5. 1. 59
19	Sa.	2. 11. 53. 44	2. 17. 49. 53	5. 9. 34	5. 13. 50
20	*Su.*	2. 23. 46. 55	2. 29. 45. 23	5. 14. 44	5. 12. 15
21	M.	3. 5. 45. 40	3. 11. 48. 22	5. 6. 21	4. 57. 1
22	Tu.	3. 17. 53. 47	3. 24. 2. 18	4. 44. 15	4. 28. 8
23	W.	4. 0. 14. 20	4. 6. 30. 0	4. 8. 42	3. 46. 8
24	Th.	4. 12. 49. 32	4. 19. 13. 4	3. 20. 32	2. 52. 10
25	F.	4. 25. 40. 35	5. 2. 12. 9	2. 21. 15	1. 48. 13
26	Sa.	5. 8. 47. 34	5. 15. 26. 54	1. 13. 21	0. 37. 7 S
27	*Su.*	5. 22. 9. 49	5. 28. 56. 15	0. 0. 4 S	0. 37. 21 N
28	M.	6. 5. 45. 49	6. 12. 38. 23	1. 14. 32 N	1. 50. 56

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Tu.	22	16. 8	189. 12	195. 40	2. 21 S	4. 28 S
2	W.	23	16. 59	202. 13	208. 52	6. 31	8. 30
3	Th.	24	17. 52	215. 37	222. 31	10. 23	12. 7
4	F.	25	18. 47	229. 32	236. 42	13. 43	15. 7
5	Sa.	26	19. 44	244. 0	251. 24	16. 18	17. 13
6	*Su.*	27	20. 43	258. 54	266. 29	17. 53	18. 15
7	M.	28	21. 42	274. 6	281. 44	18. 19	18. 6
8	Tu.	29	22. 40	289. 20	296. 51	17. 34	16. 45
9	W.	30	23. 36	304. 16	311. 33	15. 40	14. 22
10	Th.	1	♂	318. 43	325. 44	12. 50	11. 8
11	F.	2	0. 30	332. 34	339. 16	9. 17	7. 21
12	Sa.	3	1. 20	345. 49	352. 15	5. 20	3. 17 S
13	*Su.*	4	2. 9	358. 33	4. 46	1. 13 S	0. 50 N
14	M.	5	2. 56	10. 54	16. 57	2. 51 N	4. 48
15	Tu.	6	3. 42	22. 58	28. 57	6. 40	8. 27
16	W.	7	4. 27	34. 55	40. 53	10. 7	11. 40
17	Th.	8	5. 12	46. 52	52. 52	13. 4	14. 20
18	F.	9	5. 58	58. 54	64. 59	15. 26	16. 22
19	Sa.	10	6. 45	71. 6	77. 16	17. 7	17. 42
20	*Su.*	11	7. 32	83. 28	89. 44	18. 5	18. 16
21	M.	12	8. 20	96. 2	102. 22	18. 14	18. 1
22	Tu.	13	9. 9	108. 44	115. 7	17. 34	16. 56
23	W.	14	9. 58	121. 31	127. 55	16. 4	15. 1
24	Th.	15	10. 47	134. 19	140. 43	13. 47	12. 21
25	F.	16	11. 36	147. 7	153. 32	10. 46	9. 1
26	Sa.	17	12. 25	159. 57	166. 22	7. 9	5. 10
27	*Su.*	18	13. 15	172. 49	179. 17	3. 7 N	1. 0 N
28	M.	19	14. 6	185. 48	192. 22	1. 9 S	3. 18 S

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Tu.	15. 49	15. 53	58. 3	58. 17	4915	4897
2	W.	15. 57	16. 0	58. 31	58. 44	4880	4864
3	Th.	16. 4	16. 7	58. 57	59. 9	4848	4833
4	F.	16. 10	16. 13	59. 21	59. 31	4819	4806
5	Sa.	16. 16	16. 18	59. 40	59. 48	4795	4786
6	*Su.*	16. 19	16. 20	59. 54	59. 58	4778	4773
7	M.	16. 21	16. 21	60. 0	59. 59	4771	4772
8	Tu.	16. 20	16. 18	59. 55	59. 49	4777	4784
9	W.	16. 16	16. 12	59. 40	59. 28	4795	4810
10	Th.	16. 8	16. 3	59. 13	58. 56	4828	4849
11	F.	15. 58	15. 53	58. 37	58. 16	4872	4898
12	Sa.	15. 47	15. 41	57. 54	57. 32	4926	4953
13	*Su.*	15. 34	15. 28	57. 9	56. 46	4983	5012
14	M.	15. 22	15. 16	56. 24	56. 3	5040	5067
15	Tu.	15. 11	15. 6	55. 43	55. 25	5093	5116
16	W.	15. 2	14. 58	55. 9	54. 55	5137	5155
17	Th.	14. 55	14. 52	54. 44	54. 35	5170	5182
18	F.	14. 51	14. 50	54. 29	54. 25	5190	5195
19	Sa.	14. 49	14. 50	54. 24	54. 25	5197	5195
20	*Su.*	14. 51	14. 53	54. 30	54. 36	5189	5181
21	M.	14. 55	14. 58	54. 44	54. 55	5170	5155
22	Tu.	15. 1	15. 5	55. 7	55. 21	5140	5122
23	W.	15. 9	15. 14	55. 37	55. 53	5100	5080
24	Th.	15. 19	15. 24	56. 11	56. 29	5056	5033
25	F.	15. 29	15. 34	56. 48	57. 6	5009	4986
26	Sa.	15. 38	15. 43	57. 24	57. 41	4964	4942
27	*Su.*	15. 47	15. 52	57. 57	58. 12	4922	4903
28	M.	15. 56	15. 59	58. 26	58. 38	4886	4871

Distances of ☽'s Center from ☉, and from Stars east of her.

Days	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Antares.	57. 29. 45	55. 50. 16	54. 10. 43	52. 31. 4
2		44. 11. 42	42. 31. 45	40. 51. 50	39. 12. 0
3		30. 54. 56	29. 16. 6	27. 38. 0	26. 0. 38
4		18. 10. 4			
1	The Sun.			120. 17. 28	118. 43. 26
2		110. 50. 15	109. 15. 4	107. 39. 42	106. 4. 8
3		98. 3. 33	96. 26. 52	94. 49. 59	93. 12. 55
4		85. 5. 4	83. 26. 57	81. 48. 39	80. 10. 11
5		71. 55. 36	70. 16. 13	68. 36. 42	66. 57. 3
6		58. 36. 56	56. 56. 35	55. 16. 8	53. 35. 36
7		45. 11. 57	43. 31. 6	41. 50. 14	40. 9. 22
12	α Arietis.	50. 11. 32	48. 34. 58	46. 59. 0	45. 23. 39
13		37. 37. 19	36. 6. 29	34. 36. 35	33. 7. 38
14	Aldebaran.	55. 30. 31	53. 54. 45	52. 19. 19	50. 44. 12
15		42. 53. 17	41. 20. 0	39. 47. 1	38. 14. 18
16		30. 34. 35	29. 3. 22	27. 32. 23	26. 1. 37
17		18. 30. 36			
17	Pollux.	62. 52. 35	61. 25. 4	59. 57. 45	58. 30. 39
18		51. 18. 8	49. 52. 10	48. 26. 23	47. 0. 48
19		39. 55. 56			
19	Regulus.	74. 54. 26	73. 25. 56	71. 57. 23	70. 28. 48
20		63. 5. 7	61. 36. 9	60. 7. 6	58. 37. 55
21		51. 10. 24	49. 40. 28	48. 10. 23	46. 40. 8
22		39. 6. 18	37. 34. 59	36. 3. 28	34. 31. 45
23		26. 50. 2	25. 17. 7	23. 44. 1	22. 10. 43
24	Spiça ♍	67. 47. 45	66. 12. 30	64. 37. 0	63. 1. 14
25		54. 58. 33	53. 21. 14	51. 43. 41	50. 5. 53
26		41. 53. 32	40. 14. 23	38. 35. 3	36. 55. 32
27		28. 35. 53			
27	Antares.	74. 29. 50	72. 49. 39	71. 9. 18	69. 28. 47
28		61. 4. 2	59. 22. 42	57. 41. 17	55. 59. 47
M. 1		47. 31. 39			

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		50. 51. 21	49. 11. 30	47. 31. 35	45. 51. 39
2	Antares.	37. 32. 16	35. 52. 32	34. 13. 4	32. 33. 50
3		24. 24. 0	22. 48. 31	21. 14. 15	19. 41. 23
1		117. 9. 12	115. 34. 45	114. 0. 6	112. 25. 16
2		104. 28. 24	102. 52. 28	101. 16. 21	99. 40. 2
3		91. 35. 41	89. 58. 18	88. 20. 44	86. 42. 59
4	The Sun.	78. 31. 34	76. 52. 48	75. 13. 53	73. 34. 49
5		65. 17. 16	63. 37. 21	61. 57. 20	60. 17. 11
6		51. 54. 59	50. 14. 18	48. 33. 34	46. 52. 47
7		38. 28. 30			
11		56. 43. 8	55. 4. 30	53. 26. 20	51. 48. 46
12	α Arietis.	43. 48. 57	42. 14. 54	40. 41. 34	39. 9. 2
13		31. 39. 41			
13		61. 57. 7	60. 19. 56	58. 43. 6	57. 6. 38
14	Aldeba-	49. 9. 25	47. 34. 56	46. 0. 45	44. 26. 52
15	ran.	36. 41. 51	35. 9. 40	33. 37. 43	32. 6. 2
16		24. 31. 2	23. 0. 39	21. 30. 28	20. 0. 27
17	Pollux.	57. 3. 45	55. 37. 4	54. 10. 35	52. 44. 16
18		45. 35. 24	44. 10. 13	42. 45. 14	41. 20. 29
19		69. 0. 10	67. 31. 29	66. 2. 46	64. 33. 59
20		57. 8. 40	55. 39. 18	54. 9. 48	52. 40. 10
21	Regulus.	45. 9. 44	43. 39. 9	42. 8. 23	40. 37. 26
22		32. 59. 50	31. 27. 41	29. 55. 20	28. 22. 47
23		20. 37. 14			
23		74. 6. 5	72. 31. 54	70. 57. 27	69. 22. 44
24	Spica ♍	61. 25. 13	59. 48. 56	58. 12. 24	56. 35. 36
25		48. 27. 51	46. 49. 34	45. 11. 6	43. 32. 25
26		35. 15. 52	33. 36. 4	31. 56. 8	30. 16. 4
27	Antares.	67. 48. 6	66. 7. 16	64. 26. 19	62. 45. 14
28		54. 18. 13	52. 36. 36	50. 54. 58	49. 13. 19

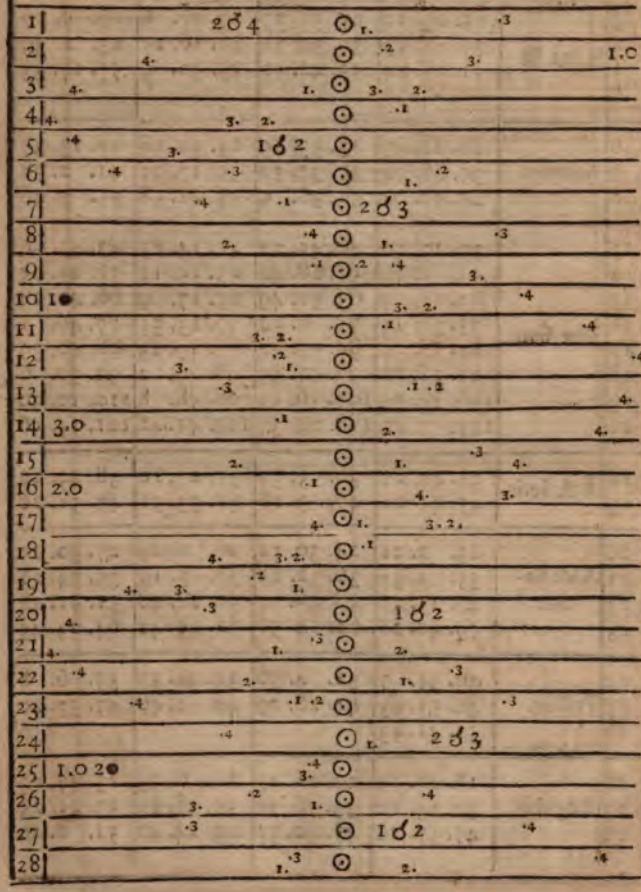
Distances of Moon's Center from ☉, and from Stars west of her.

Days.	Stars Names.	Noon. D. M. S.	3 Hours. D. M. S.	6 Hours. D. M. S.	9 Hours. D. M. S.
1	Regulus.	42. 41. 17	44. 22. 31	46. 3. 56	47. 45. 34
2		56. 16. 46	57. 59. 34	59. 42. 33	61. 25. 43
3		70. 4. 23			
3	Spica ♍	17. 1. 10	18. 42. 22	20. 24. 7	22. 6. 25
4		30. 44. 35	32. 29. 15	34. 14. 12	35. 59. 25
5		44. 48. 47	46. 35. 16	48. 21. 55	50. 8. 45
6		59. 5. 6	60. 52. 46	62. 40. 33	64. 28. 26
7	Antares.	28. 55. 10	30. 37. 33	32. 20. 35	34. 4. 16
8		42. 47. 55	44. 33. 21	46. 18. 54	48. 4. 35
9		56. 53. 30			
14	The Sun.	45. 11. 33	46. 39. 37	48. 7. 21	49. 34. 46
15		56. 47. 22	58. 13. 0	59. 38. 21	61. 3. 26
16		68. 5. 4	69. 28. 40	70. 52. 3	72. 15. 13
17		79. 8. 18	80. 30. 27	81. 52. 27	83. 14. 20
18		90. 1. 59	91. 23. 16	92. 44. 30	94. 5. 41
19		100. 51. 11	102. 12. 15	103. 33. 21	104. 54. 29
20		111. 40. 55	113. 2. 27	114. 24. 5	115. 45. 50
18	♈ Arietis.	29. 25. 27	30. 44. 14	32. 3. 42	33. 23. 47
19		40. 12. 1	41. 34. 52	42. 58. 2	44. 21. 32
20		51. 23. 20			
20	Aldebaran.	17. 4. 27	18. 33. 32	20. 2. 44	21. 31. 59
21		29. 0. 10	30. 30. 15	32. 0. 31	33. 30. 57
22		41. 5. 52	42. 37. 27	44. 9. 15	45. 41. 17
23		53. 25. 2	54. 58. 30	56. 32. 13	58. 6. 12
24		66. 0. 5			
24	Pollux.	24. 47. 25	26. 12. 40	27. 39. 5	29. 6. 35
25		36. 38. 2	38. 10. 33	39. 43. 41	41. 17. 26
26		49. 13. 27	50. 50. 0	52. 26. 56	54. 4. 14
27	Regulus.	25. 28. 13	27. 9. 21	28. 50. 46	30. 32. 27
28		39. 4. 11	40. 47. 9	42. 30. 19	44. 13. 40
M. 1		52. 52. 47			

Diſtances of ☽'s center from ☉, and from ſtars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Regulus.	49. 27. 23	51. 9. 26	52. 51. 41	54. 34. 8
2		63. 9. 4	64. 52. 37	66. 36. 21	68. 20. 17
3	Spica ♍	23. 49. 12	25. 32. 27	27. 16. 6	29. 0. 10
4		37. 44. 53	39. 30. 32	41. 16. 25	43. 2. 30
5		51. 55. 44	53. 42. 52	55. 30. 9	57. 17. 33
6		66. 16. 26			
6	Antares.	22. 14. 47	23. 53. 19	25. 32. 58	27. 13. 37
7		35. 48. 24	37. 32. 51	39. 17. 35	41. 2. 38
8		49. 50. 21	51. 36. 9	53. 21. 58	55. 7. 46
13	The Sun.	39. 15. 56	40. 45. 21	42. 14. 25	43. 43. 9
14		51. 1. 53	52. 28. 42	53. 55. 12	55. 21. 25
15		62. 28. 15	63. 52. 49	65. 17. 9	66. 41. 14
16		73. 38. 11	75. 0. 58	76. 23. 35	77. 46. 1
17		84. 36. 5	85. 57. 42	87. 19. 13	88. 40. 39
18		95. 26. 50	96. 47. 57	98. 9. 2	99. 30. 6
19		106. 15. 39	107. 36. 53	108. 58. 8	110. 19. 30
20		117. 7. 40	118. 29. 37	119. 51. 42	121. 13. 56
18	α Arietis.	34. 44. 27	36. 5. 39	37. 27. 20	38. 49. 29
19		45. 45. 21	47. 9. 28	48. 33. 51	49. 58. 26
20	Aldebaran.	23. 1. 21	24. 30. 51	26. 0. 29	27. 30. 15
21		35. 1. 34	36. 32. 21	38. 3. 19	39. 34. 29
22		47. 13. 32	48. 46. 2	50. 18. 48	51. 51. 48
23		59. 40. 26	61. 14. 56	62. 49. 42	64. 24. 45
24	Pollux.	30. 35. 7	32. 4. 36	33. 34. 57	35. 6. 8
25		42. 51. 43	44. 26. 29	46. 1. 40	47. 37. 20
26		55. 41. 53			
26	Regulus.	18. 46. 54	20. 26. 43	22. 6. 53	23. 47. 23
27		32. 14. 22	33. 56. 30	35. 38. 51	37. 21. 25
28		45. 57. 11	47. 40. 51	49. 24. 41	51. 8. 40

Configurations of the SATELLITES of JUPITER at 7 o'th' Clock in the Evening.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	David.
2	W.	Chad.
3	Th.	
4	F.	
5	Sa.	*Prs. of Heſſe born.*
6	*Su.*	*3d Sunday in Lent.*
7	M.	Perpetua.
8	Tu.	
9	W.	
10	Th.	
11	F.	
12	Sa.	Gregory M.
13	*Su.*	*4th Sunday in Lent. Mid-*
14	M.	*[lent Sunday.*
15	Tu.	
16	W.	
17	Th.	
18	F.	Edw. K. of Weſt. Sax.
19	Sa.	*Prs. Louiſa Ann born.*
20	*Su.*	*5th Sunday in Lent.*
21	M.	Benedict.
22	Tu.	
23	W.	
24	Th.	[Cam. T. ends.
25	F.	*Annunciation of V. Mary.*
26	Sa.	Oxford Term ends.
27	*Su.*	*6th Sunday in Lent. Palm*
28	M.	*[Sunday.*
29	Tu.	
30	W.	
31	Th.	

Phaſes of the Moon.

	D.	H.	M.
Laſt Quarter —	4.	22.	21
New Moon —	11.	21.	55
Firſt Quarter —	19.	20.	31
Full Moon —	27.	11.	28

Other Phenomena.

D.

1. ☿ Stationary.
   ☾ ♑ ♍ 21h. 17′.
3. ☾ ♈ ♎ 7h. 27′.
   ☾ ♊ ♎ 11h. 15′.
8. ☾ ♉ ♍ 4h. 16′.
10. ☾ ♑ ♒ 6h. 56′.
11. ☉ eclipſed, inviſible.
13. ♂ ☿ ♀ diff. Lat. 7°. 50′.
17. ☾ ♈ ♉ 13h. 38′.
    ☾ 1 ad ♂ ♉ 15h. 47′.
    ☾ 2 ad ♂ ♉ 16h. 18′.
    ☾ ♋ ♉ 21h. 41′.
19. ♃ ♐ ♓ diff. Lat 51′.
    ♂ ☿ ♃ diff. Lat. 2°. 40′.
20. ☉ enters ♈ at 0h. 43′.
23. ☾ ♐ ♌ 19h. 55′.
24. ☾ ♌ ♌ 0h. 49′.
26. ☾ ♍ ♌ 2h. 24′.
    ☾ ♉ ♍ 12h. 15′.
27. ☾ ♊ ♍ 1h. 41′.
28. ☾ ♋ ♍ 0h. 37′.
29. ☾ ♌ ♍ 3h. 54′.
30. ☾ ♈ ♎ 14h. 8′.
    ☾ ♊ ♎ 17h. 50′.

MARCH 1774.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declin. South.	Equat. of Time. Add.	Diff
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Tu.	11. 11. 2. 6	22.59. 0,9	7. 26. 9	12. 37,3	12,6
2	W.	11. 12. 2. 10	22.53.44,9	7. 3. 16	12. 24,7	13,0
3	Th.	11. 13. 2. 12	22.57.28,4	6. 40. 18	12. 11,7	13,5
4	F.	11. 14. 2. 12	23. 1.11,4	6. 17. 15	11. 58,2	13,9
5	Sa.	11. 15. 2. 11	23. 4.54,0	5. 54. 6	11. 44,3	14,4
6	*Su.*	11. 16. 2. 8	23. 8.36,1	5. 30. 52	11. 29,9	14,7
7	M.	11. 17. 2. 4	23.12.17,9	5. 7. 33	11. 15,2	15,1
8	Tu.	11. 18. 1. 58	23.15.59,4	4. 44. 10	11. 0,1	15,5
9	W.	11. 19. 1. 50	23.19.40,5	4. 20. 44	10. 44,6	15,7
10	Th.	11. 20. 1. 41	23.23.21,2	3. 57. 14	10. 28,9	16,1
11	F.	11. 21. 1. 30	23.27. 1,6	3. 33. 42	10. 12,8	16,4
12	Sa.	11. 22. 1. 17	23.30.41,7	3. 10. 7	9. 56,4	16,7
13	*Su.*	11. 23. 1. 2	23.34.21,5	2. 46. 29	9. 39,7	16,9
14	M.	11. 24. 0. 45	23.38. 1,1	2. 22. 50	9. 22,8	17,2
15	Tu.	11. 25. 0. 25	23.41.40,4	1. 59. 10	9. 5,6	17,5
16	W.	11. 26. 0. 4	23.45.19,4	1. 35. 29	8. 48,1	17,7
17	Th.	11. 26. 59. 40	23.48.58,2	1. 11. 47	8. 30,4	17,9
18	F.	11. 27. 59. 14	23.52.36,8	0. 48. 5	8. 12,5	18,1
19	Sa.	11. 28. 58. 45	23.56.15,3	0. 24. 23	7. 54,4	18,3
20	*Su.*	11. 29. 58. 14	23.59.53,5	0. 0. 42 North.	7. 36,1	18,3
21	M.	0. 0. 57. 41	0. 3.31,6	0. 22. 58	7. 17,8	18,5
22	Tu.	0. 1. 57. 6	0. 7. 9,7	0. 46. 37	6. 59,3	18,6
23	W.	0. 2. 56. 28	0.10.47,6	1. 10. 15	6. 40,7	18,7
24	Th.	0. 3. 55. 47	0.14.25,4	1. 33. 50	6. 22,0	18,8
25	F.	0. 4. 55. 4	0.18. 3,1	1. 57. 23	6. 3,2	18,8
26	Sa.	0. 5. 54. 19	0.21.40,8	2. 20. 53	5. 44,4	18,7
27	*Su.*	0. 6. 53. 33	0.25.18,5	2. 44. 20	5. 25,7	18,8
28	M.	0. 7. 52. 44	0.28.56,3	3. 7. 44	5. 6,9	18,8
29	Tu.	0. 8. 51. 53	0.32.34,1	3. 31. 5	4. 48,1	18,6
30	W.	0. 9. 51. 0	0.36.11,9	3. 54. 22	4. 29,5	18,6
31.	Th.	0. 10. 50. 5	0.39.49,8	4. 17. 34	4. 10,9	18,5

Days of the Month.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 10,7	1. 5,3	2. 30,2	9. 996457	5. 22. 56
7	16. 9,2	1. 4,9	2. 29,7	9. 997166	5. 22. 37
13	16. 7,5	1. 4,6	2. 29,2	9. 997888	5. 22. 18
19	16. 5,9	1. 4,4	2. 28,8	9. 998612	5. 21. 59
25	16. 4,2	1. 4,3	2. 28,3	9. 999344	5. 21. 40

The Eclipses of JUPITER's Satellites will not be visible this Month, JUPITER being too near the Sun.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Gr. El. 24d.						
1	11. 19. 45	5. 49 S	11. 13. 21	1. 33 S	7. 59 S	0. 11
7	0. 19. 46	3. 5 S	11. 25. 2	0. 47 S	2. 42 S	0. 31
13	1. 24. 56	1. 6 N	0. 6. 30	0. 18 N	2. 52 N	0. 49
19	3. 2. 38	5. 6	0. 16. 30	1. 33	7. 56	1, 2
25	4. 8. 9	6. 56	0. 23. 29	2. 39	11. 23	1. 5
VENUS. Inf. ☌ 22d. 21h.						
1	4 27. 19	3. 14 N	0. 11. 1	6. 48 N	10. 37 N	1. 40
7	5. 7. 3	3. 21	0. 10. 27	7. 42	11. 12	1. 14
13	5. 16. 48	3. 23	0. 8. 28	8. 17	10. 58	0. 43
19	5. 26. 31	3. 19	0. 5. 15	8. 27	9. 50	0. 10
25	6. 6. 14	3. 9	0. 1. 28	8. 2	7. 57	23. 29
MARS.						
1	10. 26. 29	1. 50 S	11. 2. 33	1. 4 S	11. 35 S	23. 30
7	11. 0. 16	1. 49	11. 7. 17	1. 3	9. 51	23. 26
13	11. 4. 5	1. 47	11. 11. 59	1. 3	8. 3	23. 21
19	11. 7. 53	1. 45	11. 16. 42	1. 2	6. 12	23. 17
25	11. 11. 42	1. 42	11. 21. 24	1. 1	4. 21	23. 12
JUPITER.						
1	0. 18. 32	1. 18 S	0. 12. 31	1. 7 S	3. 55 N	1. 57
7	0. 19. 5	1. 18	0. 13. 53	1. 6	4 28	1. 40
13	0. 19. 38	1. 18	0. 15. 16	1. 6	5. 1	1. 23
19	0. 20. 11	1. 18	0. 16. 40	1. 5	5. 34	1. 6
25	0. 20. 43	1. 17	0. 18. 5	1. 5	6. 6	0. 50
SATURN. ☍ 12d. 18¾h.						
1	5. 22. 24	2. 11 N	5. 23. 44	2. 27 N	4. 45 N	12. 49
7	5. 22. 37	2. 11	5. 23. 15	2. 27	4. 57	12. 25
13	5. 22. 49	2. 12	5. 22. 47	2. 28	5. 8	12. 1
19	5. 23. 1	2. 12	5. 22. 19	2. 28	5. 19	11. 37
25	5. 23. 13	2. 12	5. 21. 51	2. 28	5. 30	11. 14

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Tu.	6. 19. 33. 38	6. 26. 31. 16	2. 25. 54 N	2. 58. 59 N
2	W.	7. 3. 30. 56	7. 10. 32. 29	3. 29. 30	3. 57. 1
3	Th.	7. 17. 35. 29	7. 24. 39. 42	4. 21. 3	4. 41. 9
4	F.	8. 1. 44. 49	8. 8. 50. 37	4. 57. 3	5. 8. 26
5	Sa.	8. 15. 56. 48	8. 23. 3. 0	5. 15. 6	5. 16. 57
6	*Su.*	9. 0. 8. 58	9. 7. 14. 25	5. 13. 58	5. 6. 14
7	M.	9. 14. 18. 58	9. 21. 22. 25	4. 53. 51	4. 37. 0
8	Tu.	9. 28. 24. 18	10. 5. 24. 17	4. 16. 4	3. 51. 24
9	W.	10. 12. 22. 8	10. 19. 17. 20	3. 23. 24	2. 52. 36
10	Th.	10. 26. 9. 43	11. 2. 58. 56	2. 19. 26	1. 44. 36
11	F.	11. 9. 44. 41	11. 16. 26. 36	1. 8. 33 N	0. 31. 51 N
12	Sa.	11. 23. 4. 42	11. 29. 38. 46	0. 4. 54 S	0. 41. 9 S
13	*Su.*	0. 6. 8. 42	0. 12. 34. 29	1. 16. 36	1. 50. 42
14	M.	0. 18. 56. 9	0. 25. 13. 47	2. 22. 57	2. 53. 11
15	Tu.	1. 1. 27. 38	1. 7. 37. 53	3. 20. 59	3. 46. 10
16	W.	1. 13. 44. 47	1. 19. 48. 47	4. 8. 32	4. 27. 54
17	Th.	1. 25. 50. 14	2. 1. 49. 37	4. 44. 11	4. 57. 16
18	F.	2. 7. 47. 22	2. 13. 44. 5	5. 7. 3	5. 13. 31
19	Sa.	2. 19. 40. 16	2. 25. 36. 34	5. 16. 37	5. 16. 21
20	*Su.*	3. 1. 33. 25	3. 7. 31. 33	5. 12. 42	5. 5. 40
21	M.	3. 13. 31. 32	3. 19. 33. 56	4. 55. 18	4. 41. 34
22	Tu.	3. 25. 39. 12	4. 1. 48. 1	4. 24. 35	4. 4. 24
23	W.	4. 8. 0. 50	4. 14. 17. 58	3. 41. 8	3. 14. 58
24	Th.	4. 20. 39. 58	4. 27. 6. 58	2. 46. 3	2. 14. 38
25	F.	5. 3. 39. 18	5. 10. 17. 2	1. 41. 4	1. 5. 42 S
26	Sa.	5. 17. 0. 13	5. 23. 48. 41	0. 28. 55 S	0. 8. 44 N
27	*Su.*	6. 0. 42. 17	6. 7. 40. 40	0. 46. 41 N	1. 24. 21
28	M.	6. 14. 43. 28	6. 21. 50. 5	2. 1. 10	2. 36. 23
29	Tu.	6. 28. 59. 54	7. 6. 12. 19	3. 9. 23	3. 39. 33
30	W.	7. 13. 26. 28	7. 20. 41. 47	4. 6. 18	4. 29. 12
31	Th.	7. 27. 57. 26	8. 5. 12. 41	4. 47. 45	5. 1. 39

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Tu.	20	14. 57	199. 0	205. 41	5. 25 S	7. 28 S
2	W.	21	15. 51	212. 30	219. 23	9. 26	11. 15
3	Th.	22	16. 46	226. 23	233. 29	12. 55	14. 25
4	F.	23	17. 42	240. 41	247. 58	15. 41	16. 43
5	Sa.	24	18. 39	255. 19	262. 44	17. 30	18. 1
6	*Su.*	25	19. 37	270. 10	277. 36	18. 14	18. 10
7	M.	26	20. 34	285. 0	292. 21	17. 50	17. 12
8	Tu.	27	21. 30	299. 38	306. 48	16. 19	15. 12
9	W.	28	22. 24	313. 51	320. 48	13. 51	12. 19
10	Th.	29	23. 16	327. 36	334. 18	10. 37	8. 48
11	F.	1	♂	340. 52	347. 19	6. 52	4. 52
12	Sa.	2	0. 5	353. 41	359. 57	2. 50 S	0. 46 S
13	*Su.*	3	0. 52	6. 9	12. 17	1. 16 N	3. 16 N
14	M.	4	1. 38	18. 23	24. 26	5. 13	7. 5
15	Tu.	5	2. 25	30. 29	36. 30	8. 51	10. 30
16	W.	6	3. 11	42. 33	48. 36	12. 1	13. 24
17	Th.	7	3. 57	54. 40	60. 45	14. 38	15. 41
18	F.	8	4. 44	66. 52	73. 1	16. 35	17. 17
19	Sa.	9	5. 30	79. 11	85. 24	17. 48	18. 7
20	*Su.*	10	6. 19	91. 38	97. 53	18. 15	18. 10
21	M.	11	7. 7	104. 10	110. 28	17. 54	17. 24
22	Tu.	12	7. 55	116. 47	123. 7	16. 43	15. 49
23	W.	13	8. 44	129. 27	135. 48	14. 44	13. 27
24	Th.	14	9. 33	142. 10	148. 33	12. 0	10. 23
25	F.	15	10. 22	154. 57	161. 23	8. 37	6. 43
26	Sa.	16	11. 13	167. 51	174. 23	4. 42	2. 36 N
27	*Su.*	17	12. 4	180. 58	187. 37	0. 26 N	1. 46 S
28	M.	18	12. 56	194. 20	201. 10	3. 57 S	6. 6
29	Tu.	19	13. 50	208. 5	215. 7	8. 11	10. 9
30	W.	20	14. 46	222. 14	229. 29	11. 59	13. 37
31	Th.	21	15. 44	236. 49	244. 15	15. 3	16. 15

MARCH 1774.

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Propor. Logar. at Noon.	Propor. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Tu.	16. 2	16. 4	58. 49	58. 59	4858	4845
2	W.	16. 6	16. 8	59. 7	59. 13	4835	4828
3	Th.	16. 9	16. 11	59. 18	59. 22	4822	4817
4	F.	16. 11	16. 12	59. 25	59. 26	4813	4812
5	Sa.	16. 12	16. 11	59. 26	59. 25	4812	4813
6	*Su.*	16. 11	16. 10	59. 23	59. 20	4816	4820
7	M.	16. 9	16. 7	59. 15	59. 10	4826	4832
8	Tu.	16. 5	16. 3	59. 3	58. 54	4841	4852
9	W.	16. 0	15. 57	58. 44	58. 32	4864	4878
10	Th.	15. 53	15. 49	58. 19	58. 5	4895	4912
11	F.	15. 45	15. 41	57. 50	57. 33	4931	4952
12	Sa.	15. 36	15. 31	57. 15	56. 56	4975	4999
13	*Su.*	15. 26	15. 21	56. 39	56. 21	5021	5044
14	M.	15. 16	15. 12	56. 3	55. 46	5067	5089
15	Tu.	15. 7	15. 3	55. 30	55. 15	5110	5129
16	W.	15. 0	14. 56	55. 1	54. 59	5148	5162
17	Th.	14. 54	14. 52	54. 40	54. 32	5175	5186
18	F.	14. 50	14. 49	54. 27	54. 24	5193	5197
19	Sa.	14. 49	14. 50	54. 23	54. 26	5198	5194
20	*Su.*	14. 51	14. 53	54. 31	54. 38	5187	5178
21	M.	14. 56	14. 59	54. 48	55. 0	5165	5149
22	Tu.	15. 3	15. 8	55. 15	55. 32	5129	5107
23	W.	15. 13	15. 19	55. 50	56. 11	5084	5056
24	Th.	15. 25	15. 30	56. 33	56. 55	5028	5000
25	F.	15. 37	15. 43	57. 18	57. 41	4971	4942
26	Sa.	15. 49	15. 55	58. 4	58. 25	4913	4887
27	*Su.*	16. 1	16. 6	58. 46	59. 4	4861	4839
28	M.	16. 10	16. 14	59. 20	59. 34	4820	4802
29	Tu.	16. 17	16. 19	59. 45	59. 53	4789	4779
30	W.	16. 21	16. 21	59. 59	60. 1	4772	4770
31	Th.	16. 21	16. 21	60. 1	59. 58	4770	4773

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		47. 31. 35	45. 49. 55	44. 8. 19	42. 26. 49
2	Antares.	34. 1. 39	32. 21. 20	30. 41. 27	29. 2. 12
3		20. 58. 36			
3		71. 19. 0	69. 44. 30	68. 10. 8	66. 36. 0
4	α Aquilæ.	58. 50. 12	57. 18. 14	55. 46. 46	54. 15. 54
5		46. 52. 25			
3		115. 22. 1	113. 43. 44	112. 5. 24	110. 27. 1
4		102. 14. 32	100. 35. 58	98. 57. 23	97. 18. 48
5	The Sun.	89. 5. 37	87. 26. 59	85. 48. 21	84. 9. 43
6		75. 56. 46	74. 18. 14	72. 39. 44	71. 1. 16
7		62. 49. 35	61. 11. 22	59. 33. 13	57. 55. 7
8		49. 45. 46	48. 8. 9	46. 30. 38	44. 53. 12
14	Aldeba-	47. 40. 20	46. 5. 20	44. 30. 35	42. 56. 7
15	ran.	35. 7. 36	33. 34. 38	32. 1. 56	30. 29. 28
16		22. 50. 34	21. 19. 26	19. 48. 29	18. 17. 44
17		55. 21. 29	53. 54. 20	52. 27. 25	51. 0. 45
18	Pollux.	43. 51. 4	42. 25. 53	41. 0. 59	39. 36. 23
19		32. 38. 30			
19		67. 10. 29	65. 41. 55	64. 13. 21	62. 44. 46
20		55. 21. 22	53. 52. 29	52. 23. 31	50. 54. 27
21	Regulus.	43. 27. 16	41. 57. 25	40. 27. 24	38. 57. 13
22		31. 23. 40	29. 52. 21	28. 20. 49	26. 49. 6
23		19. 7. 29			
23		72. 35. 41	71. 2. 9	69. 28. 19	67. 54. 9
24		59. 58. 38	58. 22. 35	56. 46. 12	55. 9. 30
25	Spica ♍	47. 1. 3	45. 22. 23	43. 43. 24	42. 4. 6
26		33. 43. 13	32. 2. 14	30. 21. 2	28. 39. 40
27		20. 11. 13			
27		66. 3. 35	64. 20. 48	62. 37. 47	60. 54. 32
28	Antares.	52. 15. 39	50. 31. 29	48. 47. 14	47. 2. 57
29		38. 21. 52	36. 37. 56	34. 54. 16	33. 10. 58
30		24. 42. 44			
30		75. 2. 48	73. 25. 14	71. 47. 50	70. 10. 38
31	α Aquilæ.	62. 9. 10	60. 34. 4	58. 59. 28	57. 25. 26
A. 1		49. 45. 41			

Distances of ☽'s Center from ☉, and from Stars east of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Antares.	40. 45. 23	39. 4. 6	37. 23. 0	35. 42. 12
2		27. 23. 36	25. 45. 51	24. 9. 1	22. 33. 11
3	∝ Aquilæ.	65. 2. 8	63. 28. 37	61. 55. 25	60. 22. 36
4		52. 45. 41	51. 16. 10	49. 47. 24	48. 19. 28
2			120. 16. 33	118. 38. 26	117. 0. 15
3		108. 48. 35	107. 10. 7	105. 31. 37	103. 53. 5
4		95. 40. 12	94. 1. 34	92. 22. 56	90. 44. 16
5	The Sun.	82. 31. 5	80. 52. 29	79. 13. 53	77. 35. 19
6		69. 22. 50	67. 44. 27	66. 6. 7	64. 27. 50
7		56. 17. 5	54. 39. 8	53. 1. 16	51. 23. 28
8		43. 15. 53	41. 38. 41	40. 1. 38	38. 24. 36
13		54. 3. 5	52. 26. 59	50. 51. 10	49. 15. 37
14	Aldeba-	41. 21. 54	39. 47. 57	38. 14. 15	36. 40. 48
15	ran.	28. 57. 14	27. 25. 14	25. 53. 28	24. 21. 55
16		16. 47. 10			
16		61. 12. 20	59. 44. 18	58. 16. 28	56. 48. 52
17	Pollux.	49. 34. 19	48. 8. 8	46. 42. 11	45. 16. 30
18		38. 12. 6	36. 48. 9	35. 24. 34	34. 1. 21
19		61. 16. 11	59. 47. 33	58. 18. 53	56. 50. 10
20		49. 25. 16	47. 55. 58	46. 26. 32	44. 56. 58
21	Regulus.	37. 26. 52	35. 56. 21	34. 25. 39	32. 54. 45
22		25. 17. 10	23. 45. 2	22. 12. 43	20. 40. 12
23		66. 19. 41	64. 44. 54	63. 9. 48	61. 34. 23
24	Spica ♍	53. 32. 28	51. 55. 6	50. 17. 24	48. 39. 23
25		40. 24. 30	38. 44. 36	37. 4. 24	35. 23. 56
26		26. 58. 9	25. 16. 31	23. 34. 48	21. 53. 1
27		59. 11. 5	57. 27. 27	55. 43. 39	53. 59. 43
28	Antares.	45. 18. 38	43. 34. 19	41. 50. 3	40. 5. 54
29		31. 28. 6	29. 45. 46	28. 4. 2	26. 23. 0
30	∝ Aquilæ.	68. 33. 41	66. 57. 1	65. 20. 41	63. 44. 43
31		55. 52. 2	54. 19. 18	52. 47. 18	51. 16. 5

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Regulus.	52. 52. 47	54. 37. 3	56. 21. 27	58. 5. 58
2		66. 50. 5	68. 35. 12	70. 20. 25	72. 5. 43
3	Spica ♍	27. 37. 28	29. 21. 45	31. 6. 14	32. 50. 55
4		41. 36. 12	43. 21. 30	45. 6. 52	46. 52. 17
5		55. 40. 6	57. 25. 44	59. 11. 23	60. 57. 2
6		69. 45. 17			
6	Antares.	25. 27. 30	27. 5. 47	28. 44. 46	30. 24. 21
7		38. 49. 31	40. 31. 30	42. 13. 39	43. 56. 0
8		52. 29. 7	54. 11. 52	55. 54. 38	57. 37. 23
9		66. 10. 35	67. 53. 1	69. 35. 20	71. 17. 32
10	♑ Capri-	25. 19. 38	27. 2. 31	28. 45. 12	30. 27. 42
11	corni.	38. 57. 10			
15				39. 25. 59	40. 51. 2
16		47. 52. 52	49. 16. 37	50. 40. 10	52. 3. 32
17		58. 57. 40	60. 20. 2	61. 42. 16	63. 4. 22
18	The Sun.	69. 53. 10	71. 14. 40	72. 36. 7	73. 57. 31
19		80. 43. 52	82. 5. 8	83. 26. 26	84. 47. 44
20		91. 34. 47	92. 56. 25	94. 18. 8	95. 39. 58
21		102. 31. 2	103. 53. 42	105. 16. 32	106. 39. 33
22		113. 37. 38	115. 1. 55	116. 26. 26	117. 51. 16
20	Aldeba-	24. 48. 58	26. 18. 0	27. 47. 7	29. 16. 21
21		36. 44. 25	38. 14. 29	39. 44. 44	41. 15. 10
22	ran.	48. 50. 17	50. 21. 59	51. 53. 56	53. 26. 9
23		61. 11. 18	62. 45. 10	64. 19. 21	65. 53. 50
24		73. 51. 11			
24	Pollux.	31. 55. 58	33. 25. 52	34. 56. 33	36. 28. 0
25		44. 15. 42	45. 51. 4	47. 26. 59	49. 3. 26
26		57. 13. 4			
26	Regulus.	20. 19. 40	22. 0. 51	23. 42. 27	25. 24. 29
27		34. 0. 26	35. 44. 39	37. 29. 10	39. 14. 0
28		48. 2. 22	49. 48. 47	51. 35. 25	53. 22. 15
29		62. 19. 10	64. 7. 1	65. 55. 0	67. 43. 6
30		76. 44. 45			
30	Spica ♍	23. 32. 36	25. 19. 17	27. 6. 12	28. 53. 19
31		37. 50. 51	39. 38. 32	41. 26. 13	43. 13. 54
A. I		52. 11. 52			

Distances of ☽'s Center from ☉, and from Stars west of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Regulus.	59. 50. 35	61. 35. 18	63. 20. 8	65. 5. 4
2		73. 51. 6			
2	Spica ♍	20. 43. 3	22. 26. 12	24. 9. 40	25. 53. 26
3		34. 35. 46	36. 20. 43	38. 5. 47	39. 50. 57
4		48. 37. 46	50. 23. 18	52. 8. 52	53. 54. 28
5		62. 42. 42	64. 28. 21	66. 14. 0	67. 59. 39
6	Antares.	32. 4. 31	33. 45. 10	35. 26. 16	37. 7. 44
7		45. 38. 29	47. 21. 2	49. 3. 40	50. 46. 22
8		59. 20. 7	61. 2. 49	62. 45. 28	64. 28. 3
9		72. 59. 37			
9	β Capricorni.	18. 26. 26	20. 9. 59	21. 53. 22	23. 36. 35
10		32. 10. 0	33. 52. 6	35. 34. 0	37. 15. 41
15	The Sun.	42. 15. 50	43. 40. 25	45. 4. 47	46. 28. 56
16		53. 26. 42	54. 49. 41	56. 12. 30	57. 35. 10
17		64. 26. 20	65. 48. 11	67. 9. 56	68. 31. 36
18		75. 18. 51	76. 40. 8	78. 1. 24	79. 22. 39
19		86. 9. 3	87. 30. 24	88. 51. 47	90. 13. 14
20		97. 1. 54	98. 23. 58	99. 46. 11	101. 8. 32
21		108. 2. 46	109. 26. 10	110. 49. 46	112. 13. 35
22		119. 16. 21			
19	Aldebaran.	18. 53. 40	20. 22. 24	21. 51. 11	23. 20. 2
20		30. 45. 41	32. 15. 9	33. 44. 46	35. 14. 31
21		42. 45. 47	44. 16. 35	45. 47. 36	47. 18. 50
22		54. 58. 37	56. 31. 22	58. 4. 24	59. 37. 42
23		67. 28. 38	69. 3. 46	70. 39. 14	72. 15. 2
24	Pollux.	38. 0. 12	39. 33. 6	41. 6. 40	42. 40. 53
25		50. 40. 24	52. 17. 52	53. 55. 49	55. 34. 13
26	Regulus.	27. 6. 56	28. 49. 46	30. 32. 58	32. 16. 31
27		40. 59. 8	42. 44. 33	44. 30. 14	46. 16. 10
28		55. 9. 18	56. 56. 32	58. 43. 55	60. 31. 28
29		69. 31. 18	71. 19. 35	73. 7. 55	74. 56. 19
30	Spica ♍	30. 40. 36	32. 28. 1	34. 15. 33	36. 3. 10
31		45. 1. 35	46. 49. 13	48. 36. 49	50. 24. 22

JUPITER's Satellites will not be viſible this Month, JUPITER being too near the SUN.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	F.	*Good-Friday.*
2	Sa.	
3	*Su.*	*Easter-Day.* R.Bp.Chich.
4	M.	*Easter-Mon.* St.Ambrose.
5	Tu.	*Easter-Tuesday.*
6	W.	
7	Th.	
8	F.	
9	Sa.	
10	*Su.*	*1st Sunday after Easter,*
11	M.	[*Low-Sunday.*
12	Tu.	
13	W.	Oxf. and Camb. Terms
14	Th.	[begin.
15	F.	
16	Sa.	
17	*Su.*	*2d Sunday after Easter.*
18	M.	From Easter in 15 days,
19	Tu.	Alphege. [1 ret.
20	W.	Easter Term begins.
21	Th.	
22	F.	
23	Sa.	*St. George.*
24	*Su.*	*3d Sunday after Easter.*
25	M.	*St. Mark.* From Easter in
26	Tu.	[3 weeks, 2 ret.
27	W.	
28	Th.	
29	F.	
30	Sa.	

Phases of the Moon.

	D.	H.	M.
Last Quarter —	3.	4.	58
New Moon —	10.	12.	19
First Quarter —	18.	15.	14
Full Moon —	25.	21.	34

Other Phenomena.

D.

1. ☿ ☌ ♂ diff. Lat. 7°. 49′.
4. ☾ β ♍ 10^h. 2′.
6. ☾ θ ♒ 13^h. 36′.
9. ☾ ♂ 2^h. 13′.
13. ☿ Stationary.
☾ ♈ ♉ 21^h. 39′.
☾ 1 ad ☊ ♉ 23^h. 46′.
14. ☾ 2 ad ☊ ♉ 0^h. 17′.
☾ ☌ ♉ Em. 6^h. 10′. * $1\frac{3}{4}$′. N. of ☽'s cent.
Em. 7^h. 19′. *4′. N.
19. ☿ ζ ♓ diff. Lat. 6′.
☉ enters ♉ at 13^h. 33′.
20. ☾ ξ ♌ 5^h. 8′.
☾ ο ♌ 10^h. 5′.
22. ☾ τ ♌ 12^h. 27′.
☾ β ♍ 22^h. 22′.
23. ☾ ν ♍ 11^h. 53′.
24. ☿ Stationary.
☾ θ ♍ 10^h. 45′.
25. ☌ ☿ ♂ diff. Lat. 44′.
☾ κ ♍ 13^h. 43′.
26. ☾ ♈ ♎ 23^h. 7′.
27. ☾ ν ♎ 2^h. 43′.
☾ θ ♎ 6^h. 44′.
☌ ζ ♓ diff. Lat. 35′.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. North.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	F.	0. 11. 49. 9	0. 43. 27,7	4. 40. 42	3. 52,4	18,4
2	Sa.	0. 12. 48. 10	0. 47. 5,9	5. 3. 45	3. 34,0	18,1
3	*Su.*	0. 13. 47. 10	0. 50. 44,3	5. 26. 42	3. 15,9	17,9
4	M.	0. 14. 46. 9	0. 54. 22,9	5. 49. 34	2. 58,0	17,8
5	Tu.	0. 15. 45. 6	0. 58. 1,6	6. 12. 21	2. 40,2	17,7
6	W.	0. 16. 44. 1	1. 1. 40,4	6. 35. 1	2. 22,5	17,5
7	Th.	0. 17. 42. 54	1. 5. 19,5	6. 57. 34	2. 5,0	17,1
8	F.	0. 18. 41. 46	1. 8. 58,9	7. 20. 1	1. 47,9	16,9
9	Sa.	0. 19. 40. 36	1. 12. 38,5	7. 42. 20	1. 31,0	16,6
10	*Su.*	0. 20. 39. 23	1. 16. 18,3	8. 4. 31	1. 14,4	16,4
11	M.	0. 21. 38. 9	1. 19. 58,5	8. 26. 34	0. 58,0	16,0
12	Tu.	0. 22. 36. 53	1. 23. 39,0	8. 48. 29	0. 42,0	15,7
13	W.	0. 23. 35. 35	1. 27. 19,7	9. 10. 15	0. 26,3	15,4
14	Th.	0. 24. 34. 15	1. 31. 0,8	9. 31. 52	0. 10,9	15,1
15	F.	0. 25. 32. 53	1. 34. 42,2	9. 53. 19	Sub. 4,2	14,7
16	Sa.	0. 26. 31. 28	1. 38. 24,0	10. 14. 36	0. 18,9	14,5
17	*Su.*	0. 27. 30. 1	1. 42. 6,1	10. 35. 43	0. 33,4	14,1
18	M.	0. 28. 28. 32	1. 45. 48,6	10. 56. 40	0. 47,5	13,6
19	Tu.	0. 29. 27. 1	1. 49. 31,4	11. 17. 26	1. 1,1	13,2
20	W.	1. 0. 25. 28	1. 53. 14,7	11. 38. 1	1. 14,3	12,9
21	Th.	1. 1. 23. 52	1. 56. 58,4	11. 58. 24	1. 27,2	12,5
22	F.	1. 2. 22. 14	2. 0. 42,5	12. 18. 35	1. 39,7	12,0
23	Sa.	1. 3. 20. 34	2. 4. 27,0	12. 38. 34	1. 51,7	11,5
24	*Su.*	1. 4. 18. 52	2. 8. 11,9	12. 58. 21	2. 3,2	11,1
25	M.	1. 5. 17. 8	2. 11. 57,3	13. 17. 55	2. 14,3	10,6
26	Tu.	1. 6. 15. 23	2. 15. 43,3	13. 37. 16	2. 24,9	10,1
27	W.	1. 7. 13. 36	2. 19. 29,8	13. 56. 24	2. 35,0	9,6
28	Th.	1. 8. 11. 47	2. 23. 16,7	14. 15. 17	2. 44,6	9,0
29	F.	1. 9. 9. 56	2. 27. 4,2	14. 33. 57	2. 53,6	8,5
30	Sa.	1. 10. 8. 4	2. 30. 52,2	14. 52. 23	3. 2,1	7,9

Days.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 2,3	1. 4,4	2. 27,6	0. 000230	5. 21. 18
7	16. 0,6	1. 4,5	2. 27,1	0. 000996	5. 20. 59
13	15. 59,0	1. 4,8	2. 26,6	0. 001734	5. 20. 40
19	15. 57,5	1. 5,1	2. 26,1	0. 002430	5. 20. 20
25	15. 55,9	1. 5,5	2. 25,6	0. 003105	5. 20. 1

The Eclipſes of JUPITER's Satellites will not be viſible this Month, JUPITER being too near the Sun.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Inf. ☌ 11d. 6h.						
1	5. 12. 52	6. 14 N	0. 26. 29	3. 16 N	13. 17 N	0. 50
7	6. 7. 4	4. 23	0. 24. 42	2. 53	12. 16	0. 22
13	6. 27. 35	2. 12	0. 20. 35	1. 39	9. 35	23. 41
19	7. 15. 47	0. 0	0. 16. 52	0. 0	6. 38	23. 9
25	8. 2. 43	2. 2 S	0. 15. 31	1. 30 S	4. 45	22. 45
VENUS.						
1	6. 17. 32	2. 51 N	11. 27. 37	6. 59 N	5. 27 N	22. 53
7	6. 27. 11	2. 29	11. 25. 28	5. 43	3. 26	22. 25
13	7. 6. 49	2. 5	11. 24. 47	4. 22	1. 56	22. 4
19	7. 16. 25	1. 37	11. 25. 28	3. 5	1. 2	21. 47
25	7. 25. 59	1. 5	11. 27. 24	1. 53	0. 42	21. 34
MARS.						
1	11. 16. 7	1. 38 S	11. 26. 52	0. 58 S	2. 7 S	23. 6
7	11. 19. 54	1. 34	0. 1. 32	0. 56	0. 16 S	23. 1
13	11. 23. 40	1. 30	0. 6. 10	0. 54	1. 36 N	22. 56
19	11. 27. 25	1. 26	0. 10. 47	0. 52	3. 28	22. 51
25	0. 1. 9	1. 21	0. 15. 22	0. 49	5. 18	22. 45
JUPITER. ☌ 11d. 17½h.						
1	0. 21. 22	1. 17 S	0. 19. 46	1. 4 S	6. 45 N	0. 31
7	0. 21. 55	1. 17	0. 21. 12	1. 4	7. 18	0. 13
13	0. 22. 28	1. 17	0. 22. 39	1. 4	7. 50	23. 55
19	0. 23. 1	1. 17	0. 24. 6	1. 4	8. 22	23. 38
25	0. 23. 34	1. 16	0. 25. 32	1. 4	8. 53	23. 22
SATURN.						
1	5. 23. 28	2. 13 N	5. 21. 20	2. 27 N	5. 42 N	10. 47
7	5. 23. 40	2. 13	5. 20. 55	2. 27	5. 51	10. 24
13	5. 23. 52	2. 13	5. 20. 33	2. 26	6. 0	10. 1
19	5. 24. 4	2. 13	5. 20. 13	2. 26	6. 6	9. 38
25	5. 24. 17	2. 14	5. 19. 56	2. 25	6. 12	9. 14

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	F.	8. 12. 27. 1	8. 19. 39. 49	5. 10. 44 N	5. 14. 55 N
2	Sa.	8. 26. 50. 35	9. 3. 58. 56	5. 14. 2	5. 8. 21
3	*Su.*	9. 11. 4. 24	9. 18. 6. 56	4. 57. 59	4. 43. 11
4	M.	9. 25. 6. 20	10. 2. 2. 21	4. 24. 18	4. 1. 38
5	Tu.	10. 8. 55. 7	10. 15. 44. 27	3. 35. 41	3. 6. 52
6	W.	10. 22. 30. 21	10. 29. 13. 4	2. 35. 40	2. 2. 36
7	Th.	11. 5. 52. 21	11. 12. 28. 29	1. 28. 7	0. 52. 41 N
8	F.	11. 19. 1. 22	11. 25. 31. 8	0. 17. 1 N	0. 18. 39 S
9	Sa.	0. 1. 57. 49	0. 8. 21. 26	0. 53. 47 S	1. 27. 52
10	*Su.*	0. 14. 42. 7	0. 20. 59. 47	2. 0. 36	2. 31. 36
11	M.	0. 27. 14. 33	1. 3. 26. 34	3. 0. 25	3. 26. 54
12	Tu.	1. 9. 35. 59	1. 15. 42. 44	3. 50. 46	4. 11. 47
13	W.	1. 21. 47. 7	1. 27. 49. 22	4. 29. 46	4. 44. 39
14	Th.	2. 3. 49. 33	2. 9. 48. 13	4. 56. 16	5. 4. 37
15	F.	2. 15. 45. 32	2. 21. 41. 52	5. 9. 36	5. 11. 16
16	Sa.	2. 27. 37. 49	3. 3. 33. 40	5. 9. 35	5. 4. 35
17	*Su.*	3. 9. 30. 2	3. 15. 27. 31	4. 56. 19	4. 44. 49
18	M.	3. 21. 26. 29	3. 27. 27. 43	4. 30. 10	4. 12. 25
19	Tu.	4. 3. 31. 42	4. 9. 39. 10	3. 51. 46	3. 28. 14
20	W.	4. 15. 50. 36	4. 22. 6. 37	3. 2. 4	2. 33. 22
21	Th.	4. 28. 27. 51	5. 4. 54. 38	2. 2. 26	1. 29. 27
22	F.	5. 11. 27. 27	5. 18. 6. 41	0. 54. 50 S	0. 18. 57 S
23	Sa.	5. 24. 52. 30	6. 1. 44. 58	0. 17. 46 N	0. 54. 47 N
24	*Su.*	6. 8. 44. 8	6. 15. 49. 40	1. 31. 34	2. 7. 25
25	M.	6. 23. 1. 4	7. 0. 17. 54	2. 41. 45	3. 13. 49
26	Tu.	7. 7. 39. 16	7. 15. 4. 14	3. 42. 59	4. 8. 30
27	W.	7. 22. 31. 46	8. 0. 0. 44	4. 30. 4	4. 47. 4
28	Th.	8. 7. 29. 56	8. 14. 58. 17	4. 59. 3	5. 5. 56
29	F.	8. 22. 24. 37	8. 29. 48. 7	5. 7. 36	5. 4. 8
30	Sa.	9. 7. 7. 52	9. 14. 23. 18	4. 55. 41	4. 42. 33

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	F.	22	16. 43	251. 41	259. 12	17. 11 S	17. 50 S
2	Sa.	23	17. 40	266. 42	274. 11	18. 12	18. 16
3	*Su.*	24	18. 38	281. 37	288. 58	18. 3	17. 34
4	M.	25	19. 34	296. 14	303. 22	16. 48	15. 48
5	Tu.	26	20. 27	310. 23	317. 15	14. 35	13. 10
6	W.	27	21. 17	324. 0	330. 37	11. 34	9. 51
7	Th.	28	22. 6	337. 7	343. 31	8. 0	6. 4
8	F.	29	22. 53	349. 48	356. 1	4. 5	2. 4 S
9	Sa.	30	23. 39	2. 10	8. 15	0. 2 S	1. 58 N
10	*Su.*	1	♂	14. 19	20. 20	3. 57 N	5. 52
11	M.	2	0. 26	26. 22	32. 25	7. 42	9. 26
12	Tu.	3	1. 12	38. 26	44. 29	11. 3	12. 32
13	W.	4	1. 58	50. 34	56. 39	13. 53	15. 4
14	Th.	5	2. 45	62. 47	68. 56	16. 5	16. 55
15	F.	6	3. 32	75. 6	81. 18	17. 34	18. 1
16	Sa.	7	4. 19	87. 31	93. 44	18. 17	18. 20
17	*Su.*	8	5. 7	99. 58	106. 12	18. 12	17. 51
18	M.	9	5. 55	112. 26	118. 40	17. 19	16. 34
19	Tu.	10	6. 43	124. 55	131. 9	15. 38	14. 31
20	W.	11	7. 31	137. 23	143. 38	13. 12	11. 44
21	Th.	12	8. 19	149. 55	156. 12	10. 7	8. 20
22	F.	13	9. 8	162. 33	168. 57	6. 26	4. 25
23	Sa.	14	9. 58	175. 25	181. 58	2. 19 N	0. 8 N
24	*Su.*	15	10. 49	188. 38	195. 24	2. 4 S	4. 16 S
25	M.	16	11. 43	202. 18	209. 21	6. 27	8. 34
26	Tu.	17	12. 39	216. 31	223. 51	10. 34	12. 25
27	W.	18	13. 38	231. 18	238. 53	14. 4	15. 30
28	Th.	19	14. 38	246. 33	254. 17	16. 40	17. 33
29	F.	20	15. 39	262. 3	269. 48	18. 8	18. 24
30	Sa.	21	16. 39	277. 29	285. 5	18. 21	18. 0

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	F.	16. 19	16. 17	59. 53	59. 47	4779	4787
2	Sa.	16. 15	16. 12	59. 38	59. 29	4798	4809
3	*Su.*	16. 9	16. 6	59. 17	59. 5	4823	4838
4	M.	16. 3	15. 59	58. 53	58. 39	4853	4870
5	Tu.	15. 55	15. 51	58. 26	58. 12	4886	4903
6	W.	15. 48	15. 44	57. 57	57. 43	4922	4940
7	Th.	15. 40	15. 36	57. 28	57. 13	4958	4977
8	F.	15. 31	15. 27	56. 58	56. 43	4996	5015
9	Sa.	15. 23	15. 19	56. 28	56. 13	5035	5054
10	*Su.*	15. 15	15. 11	55. 58	55. 44	5073	5091
11	M.	15. 7	15. 4	55. 30	55. 17	5110	5127
12	Tu.	15. 0	14. 57	55. 4	54. 53	5144	5158
13	W.	14. 55	14. 52	54. 43	54. 34	5171	5183
14	Th.	14. 50	14. 49	54. 26	54. 21	5194	5201
15	F.	14. 48	14. 47	54. 17	54. 16	5206	5207
16	Sa.	14. 47	14. 48	54. 17	54. 19	5206	5203
17	*Su.*	14. 50	14. 52	54. 25	54. 33	5195	5185
18	M.	14. 55	14. 58	54. 43	54. 56	5171	5154
19	Tu.	15. 2	15. 7	55. 11	55. 30	5134	5110
20	W.	15. 13	15. 19	55. 50	56. 12	5084	5055
21	Th.	15. 25	15. 32	56. 36	57. 1	5025	4992
22	F.	15. 40	15. 47	57. 28	57. 55	4958	4924
23	Sa.	15. 54	16. 1	58. 22	58. 49	4891	4858
24	*Su.*	16. 8	16. 15	59. 14	59. 38	4827	4798
25	M.	16. 21	16. 25	59. 59	60. 17	4772	4751
26	Tu.	16. 29	16. 32	60. 31	60. 42	4734	4721
27	W.	16. 34	16. 35	60. 49	60. 51	4712	4710
28	Th.	16. 35	16. 33	60. 50	60. 45	4711	4717
29	F.	16. 31	16. 28	60. 36	60. 24	4728	4742
30	Sa.	16. 24	16. 19	60. 10	59. 53	4759	4779

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days	Stars Names.	Noon. D. M. S.	3 Hours. D. M. S.	6 Hours. D. M. S.	9 Hours. D. M. S.
1	β Capricorni.	48. 15. 27	46. 27. 31	44. 39. 42	42. 52. 1
2		33. 55. 32	32. 8. 39	30. 21. 56	28. 35. 22
3		19. 45. 8	17. 59. 37	16. 14. 16	14. 29. 6
1	The Sun.	119. 14. 14	117. 33. 42	115. 53. 17	114. 12. 59
2		105. 53. 29	104. 14. 0	102. 34. 40	100. 55. 29
3		92. 42. 9	91. 3. 59	89. 26. 0	87. 48. 11
4		79. 41. 40	78. 4. 55	76. 28. 22	74. 51. 59
5		66. 52. 52	65. 17. 37	63. 42. 33	62. 7. 41
6		54. 16. 14	52. 42. 29	51. 8. 55	49. 35. 32
7		41. 51. 48	40. 19. 39	38. 47. 43	
12	Pollux.	71. 9. 34	69. 39. 42	68. 10. 2	66. 40. 35
13		59. 16. 30	57. 48. 20	56. 20. 23	54. 52. 40
14		47. 37. 45	46. 11. 30	44. 45. 30	43. 19. 46
15		36. 15. 52			
15	Regulus.	71. 3. 40	69. 35. 1	68. 6. 24	66. 37. 48
16		59. 15. 13	57. 46. 45	56. 18. 17	54. 49. 48
17		47. 26. 49	45. 58. 2	44. 29. 11	43. 0. 14
18		35. 34. 4	34. 4. 27	32. 34. 42	31. 4. 49
19		23. 33. 2			
19	Spica ♍	77. 4. 3	75. 32. 52	74. 1. 27	72. 29. 46
20		64. 47. 27	63. 14. 8	61. 40. 31	60. 6. 35
21		52. 11. 56	50. 36. 0	48. 59. 43	47. 23. 5
22		39. 14. 34	37. 35. 49	35. 56. 42	34. 17. 14
23		25. 55. 26			
23	Antares.	71. 49. 34	70. 8. 17	68. 26. 36	66. 44. 32
24		58. 8. 57	56. 24. 52	54. 40. 30	52. 55. 53
25		44. 9. 39	42. 23. 57	40. 38. 8	38. 52. 21
26		30. 5. 28			
26	α Aquilæ.	80. 16. 50	78. 36. 51	76. 56. 50	75. 16. 50
27		66. 58. 22	65. 19. 17	63. 40. 33	62. 2. 14
28		53. 58. 25			
28	ρ Capricorni.	53. 11. 47	51. 19. 57	49. 28. 14	47. 36. 38
29		38. 20. 41	36. 29. 59	34. 39. 28	32. 49. 9
30 M.1	α Pegaſi.	72. 32. 29	70. 50. 21	69. 8. 37	67. 27. 19
		59. 7. 47			
30 M.1	The Sun.	109. 28. 38	121. 10. 39	119. 29. 34	117. 48. 43

Distances of ☽'s Center from ☉, and from Stars east of her.

Days.	Stars Names.	12 Hours. D. M. S.	15 Hours. D. M. S.	18 Hours. D. M. S.	21 Hours. D. M. S.
1	β Capricorni.	41. 4. 27	39. 17. 1	37. 29. 43	35. 42. 33
2		26. 48. 58	25. 2. 45	23. 16. 42	21. 30. 50
3		12. 44. 6			
1	The Sun.	112. 32. 49	110. 52. 47	109. 12. 53	107. 33. 7
2		99. 16. 28	97. 37. 38	95. 58. 58	94. 20. 28
3		86. 10. 32	84. 33. 3	82. 55. 44	81. 18. 36
4		73. 15. 48	71. 39. 47	70. 3. 58	68. 28. 19
5		60. 33. 0	58. 58. 32	57. 24. 15	55. 50. 9
6		48. 2. 22	46. 29. 25	44. 56. 41	43. 24. 9
12	Pollux.	65. 11. 20	63. 42. 18	62. 13. 29	60. 44. 53
13		53. 25. 11	51. 57. 57	50. 30. 58	49. 4. 14
14		41. 54. 20	40. 29. 12	39. 4. 25	37. 39. 58
15	Regulus.	65. 9. 14	63. 40. 43	62. 12. 13	60. 43. 43
16		53. 21. 17	51. 52. 44	50. 24. 9	48. 55. 31
17		41. 31. 12	40. 2. 5	38. 32. 52	37. 3. 32
18		29. 34. 46	28. 4. 34	26. 34. 13	25. 3. 42
19	Spica ♍	70. 57. 51	69. 25. 40	67. 53. 12	66. 20. 28
20		58. 32. 20	56. 57. 44	55. 22. 48	53. 47. 32
21		45. 46. 6	44. 8. 45	42. 31. 2	40. 52. 58
22		32. 37. 28	30. 57. 24	29. 17. 2	27. 36. 23
23	Antares.	65. 2. 6	63. 19. 19	61. 36. 11	59. 52. 44
24		51. 11. 1	49. 25. 56	47. 40. 39	45. 55. 12
25		37. 6. 38	35. 21. 1	33. 35. 35	31. 50. 23
26	α Aquilæ.	73. 36. 52	71. 56. 59	70. 17. 15	68. 37. 43
27		60. 24. 19	58. 46. 56	57. 10. 7	55. 33 56
28	β Capricorni.	45. 45. 9	43. 53. 48	42. 2. 36	40. 11. 34
29		30. 59. 1			
29	α Pegasi.	79. 24. 29	77. 41. 1	75. 57. 50	74. 14. 59
30		65. 46. 26	64. 6. 1	62. 26. 6	60. 46. 41
30	The Sun.	116. 8. 5	114. 27. 48	112. 47. 47	111. 8. 4

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Spica ♍	52. 11. 52	53. 59. 17	55. 46. 35	57. 33. 47
2		66. 28. 9			
2		22. 26. 31	24. 3. 38	25. 41. 37	27. 20. 22
3		35. 42. 23	37. 23. 44	39. 5. 12	40. 46. 49
4	Antares.	49. 15. 32	50. 57. 12	52. 38. 47	54. 20. 19
5		62. 46. 36	64. 27. 30	66. 8. 16	67. 48. 53
6		76. 9. 42			
6		21. 39. 45	23. 20. 57	25. 1. 58	26. 42. 47
7	β Capri-	35. 3. 55	36. 43. 36	38. 23. 6	40. 2. 24
8	corni.	48. 15. 57	49. 54. 5	51. 32. 1	53. 9. 46
9		61. 15. 33			
14		39. 30. 53	40. 52. 52	42. 14. 45	43. 36. 32
15		50. 24. 14	51. 45. 34	53. 6. 51	54. 28. 6
16		61. 14. 2	62. 35. 12	63. 56. 22	65. 17. 34
17	The Sun.	72. 4. 10	73. 25. 42	74. 47. 19	76. 9. 2
18		82. 59. 15	84. 21. 43	85. 44. 22	87. 7. 11
19		94. 4. 8	95. 28. 11	96. 52. 29	98. 17. 2
20		105. 23. 48	106. 50. 2	108. 16. 34	109. 43. 25
21		117. 2. 52	118. 31. 48	120. 1. 6	
19	Aldeba-	56. 42. 46	58. 14. 15	59. 45. 59	61. 17. 58
20	ran.	69. 1. 57	70. 35. 37	72. 9. 37	73. 43. 56
21	Pollux.	39. 16. 4	40. 47. 59	42. 20. 32	43. 53. 42
22		51. 48. 11	53. 24. 44	55. 1. 50	56. 39. 27
23		28. 10. 45	29. 53. 12	31. 36. 6	33. 19. 27
24	Regulus.	42. 2. 47	43. 48. 42	45. 35. 0	47. 21. 41
25		56. 20. 23	58. 9. 9	59. 58. 13	61. 47. 35
26		70. 58. 11			
26		17. 53. 48	19. 41. 25	21. 29. 38	23. 18. 24
27	Spica ♍	32. 28. 15	34. 19. 0	36. 9. 52	38. 0. 52
28		47. 16. 42	49. 7. 52	50. 58. 59	52. 50. 3
29		62. 3. 37	63. 53. 51	65. 44. 1	67. 33. 57
30	Antares.	31. 54. 53	33. 38. 32	35. 22. 26	37. 6. 31
M. 1		45. 47. 9			

Distances of ☽'s Center from ☉, and from Stars west of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Spica ♍	59. 20. 54	61. 7. 54	62. 54. 47	64. 41. 32
2		28. 59. 47	30. 39. 49	32. 20. 17	34. 1. 11
3	Antares.	42. 28. 33	44. 10. 16	45. 52. 2	47. 33. 48
4		56. 1. 46	57. 43. 8	59. 24. 24	61. 5. 33
5		69. 29. 22	71. 9. 42	72. 49. 52	74. 29. 52
6		28. 23. 24	30. 3. 49	31. 44. 2	33. 24. 4
7	β Capri-	41. 41. 31	43. 20. 25	44. 59. 7	46. 37. 38
8	corni.	54. 47. 19	56. 24. 40	58. 1. 49	59. 38. 47
14		44. 58. 14	46. 19. 51	47. 41. 23	49. 2. 51
15		55. 49. 18	57. 10. 30	58. 31. 41	59. 52. 52
16		66. 38. 47	68. 0. 3	69. 21. 21	70. 42. 43
17	The Sun.	77. 30. 51	78. 52. 45	80. 14. 47	81. 36. 57
18		88. 30. 11	89. 53. 22	91. 16. 44	92. 40. 19
19		99. 41. 50	101. 6. 54	102. 32. 15	103. 57. 53
20		111. 10. 37	112. 38. 10	114. 6. 3	115. 34. 17
18		50. 39. 7	52. 9. 42	53. 40. 30	55. 11. 31
19	Aldeba-	62. 50. 13	64. 22. 43	65. 55. 30	67. 28. 35
20	ran.	75. 18. 36			
20		33. 15. 17	34. 44. 25	36. 14. 16	37. 44. 49
21	Pollux.	45. 27. 27	47. 1. 47	48. 36. 42	50. 12. 10
22		58. 17. 33			
22		21. 25. 45	23. 6. 16	24. 47. 17	26. 28. 47
23	Regulus.	35. 3. 15	36. 47. 30	38. 32. 11	40. 17. 17
24		49. 8. 44	50. 56. 8	52. 43. 53	54. 31. 58
25		63. 37. 13	65. 27. 7	67. 17. 15	69. 7. 37
26		25. 7. 38	26. 57. 18	28. 47. 19	30. 37. 39
27	Spica ♍	39. 51. 58	41. 43. 7	43. 34. 18	45. 25. 30
28		54. 41. 1	56. 31. 51	58. 22. 35	60. 13. 11
29		69. 23. 42			
29	Antares.	25. 4. 15	26. 46. 10	28. 28. 38	30. 11. 34
30		38. 50. 45	40. 34. 57	42. 19. 3	44. 3. 9

JUPITER's Satellites will not be viſible this Month, JUPITER being too near the Sun.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
		[& St. James
1	*Su.*	*4th Su. after Eaſt. St. Phil.*
2	M.	From Eaſt. in 1 mon. 3 r.
3	Tu.	Invention of the Croſs.
4	W.	
5	Th.	
6	F.	John Evan. ante P. Lat.
7	Sa.	
8	*Su.*	*5th Su. after Eaſt. Rogat.*
9	M.	From Eaſt. in 5 weeks.
10	Tu.	[4 ret.
11	W.	
12	Th.	*Aſcenſion-day. Holy Th.*
13	F.	Morrow of Aſc. 5 ret.
14	Sa.	
15	*Su.*	*Sunday after Aſcenſion-day.*
16	M.	Term ends.
17	Tu.	
18	W.	
19	Th.	*Q. Charlotte born, 1744.*
20	F.	[Dunſt. Oxf. T. ends.
21	Sa.	
22	*Su.*	*Whit-Sunday.*
23	M.	*Whit-Monday.* Cam. Ter.
24	Tu.	*Whit-Tueſ.* [divides mid.
25	W.	
26	Th.	Auguſtin, 1ſt Abp. Cant.
27	F.	Ven. Bede.
28	Sa.	
29	*Su.*	*Trinity-Su. K. Ch. II. reſt.*
30	M.	On mor. of H. Tr. 1 ret.
31	Tu.	

Phaſes of the Moon.

	D.	H.	M.
Laſt Quarter —	2.	11.	58
New Moon —	10.	3.	16
Firſt Quarter —	18.	6.	58
Full Moon —	25.	5.	22
Laſt Quarter —	31.	20.	23

D. Other Phenomena.

1. ☾ ☌ ♍ 15h. 50′.
3. ☾ ☌ ♒ 19h. 8′.
7. ☾ ☌ ☿ Im. 19h. 38′. Em. 20h. 13′. ☿ paſſes 13′ N. of ☽'s cent.
11. ☾ ☌ ♉ 4h. 38′.
☾ 1 ad ☍ ♉ 6h. 46′.
☾ 2 ad ☍ ♉ 7h. 17′.
☾ ☌ ♉ 12h. 38′.
17. ☾ ☌ ♌ 12h. 59′.
☾ ☌ ♌ 18h. 3′.
19. ☾ ☌ ♌ 21h. 38′.
20. ☾ ☌ ♍ 7h. 49′.
☉ enters ♊ at 14h. 12′.
☾ ☌ ♍ 21h. 39′.
♄ Stationary.
21. ☾ ☌ ♍ 20h. 59′.
23. ☾ ☌ ♍ 0h. 17′.
24. ☾ ☌ ♎ 9h. 39′.
☾ ☌ ♎ 13h. 13′.
☾ ☌ ♎ 16h. 11′.
25. ☾ ☌ Serpentar. 7h. 4′.
28. ☾ ☌ ♈ 23h. 22′.
31. ☾ ☌ ♒ 1h. 17′.

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Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. North.	Equat. of Time Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	*Su.*	1. 11. 6. 11	2. 34. 40,9	15. 10. 34	3. 10,0	7,4
2	M.	1. 12. 4. 16	2. 38. 30,0	15. 28. 30	3. 17,4	6,8
3	Tu.	1. 13. 2. 20	2. 42. 19,7	15. 46. 11	3. 24,2	6,2
4	W.	1. 14. 0. 23	2. 46. 10,0	16. 3. 37	3. 30,4	5,7
5	Th.	1. 14. 58. 25	2. 50. 0,9	16. 20. 47	3. 36,1	5,1
6	F.	1. 15. 56. 25	2. 53. 52,4	16. 37. 41	3. 41,2	4,5
7	Sa.	1. 16. 54. 24	2. 57. 44,4	16. 54. 18	3. 45,7	3,8
8	*Su.*	1. 17. 52. 22	3. 1. 37,1	17. 10. 39	3. 49,5	3,3
9	M.	1. 18. 50. 18	3. 5. 30,3	17. 26. 42	3. 52,8	2,8
10	Tu.	1. 19. 48. 13	3. 9. 24,2	17. 42. 28	3. 55,6	2,1
11	W.	1. 20. 46. 6	3. 13. 18,6	17. 57. 57	3. 57,7	1,6
12	Th.	1. 21. 43. 58	3. 17. 13,6	18. 13. 7	3. 59,3	1,0
13	F.	1. 22. 41. 48	3. 21. 9,1	18. 27. 59	4. 0,3	0,4
14	Sa.	1. 23. 39. 37	3. 25. 5,2	18. 42. 32	4. 0,7	0,1
15	*Su.*	1. 24. 37. 24	3. 29. 1,9	18. 56. 47	4. 0,6	0,7
16	M.	1. 25. 35. 9	3. 32. 59,1	19. 10. 42	3. 59,9	1,2
17	Tu.	1. 26. 32. 53	3. 36. 56,8	19. 24. 17	3. 58,7	1,7
18	W.	1. 27. 30. 35	3. 40. 55,2	19. 37. 33	3. 57,0	2,3
19	Th.	1. 28. 28. 16	3. 44. 54,0	19. 50. 29	3. 54,7	2,8
20	F.	1. 29. 25. 54	3. 48. 53,4	20. 3. 5	3. 51,9	3,3
21	Sa.	2. 0. 23. 31	3. 52. 53,3	20. 15. 20	3. 48,6	3,9
22	*Su.*	2. 1. 21. 7	3. 56. 53,7	20. 27. 15	3. 44,7	4,4
23	M.	2. 2. 18. 42	4. 0. 54,7	20. 38. 48	3. 40,3	4,9
24	Tu.	2. 3. 16. 15	4. 4. 56,1	20. 50. 1	3. 35,4	5,3
25	W.	2. 4. 13. 47	4. 8. 58,0	21. 0. 52	3. 30,1	5,9
26	Th.	2. 5. 11. 17	4. 13. 0,5	21. 11. 21	3. 24,2	6,4
27	F.	2. 6. 8. 47	4. 17. 3,4	21. 21. 28	3. 17,8	6,8
28	Sa.	2. 7. 6. 16	4. 21. 6,9	21. 31. 13	3. 11,0	7,4
29	*Su.*	2. 8. 3. 44	4. 25. 10,8	21. 40. 36	3. 3,6	7,8
30	M.	2. 9. 1. 11	4. 29. 15,1	21. 49. 37	2. 55,8	8,2
31	Tu.	2. 9. 58. 38	4. 33. 20,0	21. 58. 15	2. 47,6	

Days of the Month.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 54,5	1. 5,9	2. 25,3	0. 003766	5. 19. 42
7	15. 53,2	1. 6,4	2. 24,9	0. 004395	5. 19. 23
13	15. 52,0	1. 6,9	2. 24,6	0. 004961	5. 19. 4
19	15. 50,8	1. 7,4	2. 24,2	0. 005453	5. 18. 45
25	15. 49,8	1. 7,8	2. 23,9	0. 005895	5. 18. 26

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Immersions.		II. Satellite. Immersions.		III. Satellite.		
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.	
16	20. 7. 3	18	0. 10. 36	15	1. 12. 17	I
18	14. 35. 41	21	13. 28. 7	15	3. 2. 3	E
20	9. 4. 12	25	2. 45. 33	22	5. 13. 36	I
22	3. 32. 47	28	16. 2. 55	22	7. 2. 16	E
23	22. 1. 16			29	9. 14. 25	I
25	16. 29. 47			29	11. 1. 58	E
27	10. 58. 12					
29	5. 26. 38			IV. Satellite.	Conj.	
30	23. 54. 57			20	16.39.11	Inf.
				29	1.45.51	Sup.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
	MERCURY. Gr. Elong. 9d.					
1	8. 19. 12	3. 51 S	0. 17. 2	2. 33 S	4. 21 N	22. 31
7	9. 5. 59	5. 23	0. 21. 5	3. 6	5. 22	22. 25
13	9. 23. 52	6. 29	0. 27. 9	3. 12	7. 29	22. 25
19	10. 13. 45	6. 59	1. 4. 53	2. 54	10. 26	22. 31
25	11. 6. 45	6. 32	1. 14. 6	2. 16	13. 55	22. 43
	VENUS.					
1	8. 5. 31	0. 32 N	0. 0. 20	0. 50 N	0. 54 N	21. 24
7	8. 15. 3	0. 2 S	0. 4. 5	0. 2 S	1. 36	21. 16
13	8. 24. 33	0. 35	0. 8. 27	0. 46	2. 39	21. 10
19	9. 4. 3	1. 8	0. 13. 19	1. 22	4. 0	21. 6
25	9. 13. 32	1. 38	0. 18. 35	1. 51	5. 35	21. 2
	MARS.					
1	0. 4. 52	1. 16 S	0. 19. 56	0. 47 S	7. 6 N	22. 39
7	0. 8. 34	1. 11	0. 24. 29	0. 44	8. 49	22. 33
13	0. 12. 14	1. 5	0. 28. 59	0. 40	10. 30	22. 27
19	0. 15. 52	0. 59	1. 3. 28	0. 37	12. 6	22. 20
25	0. 19. 29	0. 53	1. 7. 55	0. 34	13. 38	22. 13
	JUPITER.					
1	0. 24. 7	1. 16 S	0. 26. 58	1. 4 S	9. 24 N	23. 4
7	0. 24. 39	1. 16	0. 28. 22	1. 4	9. 55	22. 46
13	0. 25. 12	1. 16	0. 29. 46	1. 4	10. 24	22. 28
19	0. 25. 45	1. 16	1. 1. 8	1. 4	10. 53	22. 9
25	0. 26. 18	1. 15	1. 2. 29	1. 5	11. 20	21. 50
	SATURN.					
1	5. 24. 29	2. 14 N	5. 19. 42	2. 24 N	6. 17 N	8. 50
7	5. 24. 41	2. 14	5. 19. 31	2. 23	6. 21	8. 26
13	5. 24. 53	2. 14	5. 19. 24	2. 22	6. 23	8. 2
19	5. 25. 6	2. 15	5. 19. 21	2. 21	6. 23	7. 39
25	5. 25. 18	2. 15	5. 19. 22	2. 20	6. 22	7. 15

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	*Su.*	9. 21. 33. 55	9. 28. 39. 23	4. 25. 6 N	4. 3. 45 N
2	M.	10. 5. 39. 39	10. 12. 34. 32	3. 38. 58	3. 11. 18
3	Tu.	10. 19. 24. 20	10. 26. 9. 0	2. 41. 12	2. 9. 13
4	W.	11. 2. 48. 52	11. 9. 24. 15	1. 35. 51	1. 1. 37 N
5	Th.	11. 15. 55. 20	11. 22. 22. 29	0. 26. 56 N	0. 7. 43 S
6	F.	11. 28. 46. 6	0. 5. 6. 27	0. 41. 54 S	1. 15. 13
7	Sa.	0. 11. 23. 43	0. 17. 38. 17	1. 47. 22	2. 17. 52
8	*Su.*	0. 23. 50. 21	1. 0. 0. 4	2. 46. 34	3. 13. 1
9	M.	1. 6. 7. 44	1. 12. 13. 23	3. 37. 5	3. 58. 27
10	Tu.	1. 18. 17. 17	1. 24. 19. 28	4. 17. 2	4. 32. 36
11	W.	2. 0. 20. 9	2. 6. 19. 30	4. 45. 1	4. 54. 14
12	Th.	2. 12. 17. 36	2. 18. 14. 41	5. 0. 13	5. 2. 52
13	F.	2. 24. 11. 2	3. 0. 6. 51	5. 2. 14	4. 58. 22
14	Sa.	3. 6. 2. 24	3. 11. 58. 5	4. 51. 14	4. 41. 0
15	*Su.*	3. 17. 54. 19	3. 23. 51. 30	4. 27. 40	4. 11. 25
16	M.	3. 29. 50. 4	4. 5. 50. 34	3. 52. 18	3. 30. 30
17	Tu.	4. 11. 53. 44	4. 17. 59. 56	3. 6. 13	2. 39. 35
18	W.	4. 24. 9. 49	5. 0. 24. 5	2. 10. 47	1. 40. 6
19	Th.	5. 6. 43. 14	5. 13. 7. 58	1. 7. 48 S	0. 34. 9 S
20	F.	5. 19. 38. 40	5. 26. 16. 3	0. 0. 25 N	0. 35. 33 N
21	Sa.	6. 3. 0. 18	6. 9. 51. 52	1. 10. 48	1. 45. 34
22	*Su.*	6. 16. 50. 48	6. 23. 57. 6	2. 19. 25	2. 51. 40
23	M.	7. 1. 10. 27	7. 8. 30. 31	3. 21. 38	3. 48. 48
24	Tu.	7. 15. 56. 30	7. 23. 27. 27	4. 12. 19	4. 31. 46
25	W.	8. 1. 2. 14	8. 8. 39. 35	4. 46. 35	4. 56. 23
26	Th.	8. 16. 18. 0	8. 23. 56. 4	5. 0. 56	5. 0. 7
27	F.	9. 1. 32. 25	9. 9. 5. 41	4. 53. 57	4. 42. 40
28	Sa.	9. 16. 34. 41	9. 23. 58. 37	4. 26. 36	4. 6. 13
29	*Su.*	10. 1. 16. 38	10. 8. 28. 18	3. 42. 2	3. 14. 40
30	M.	10. 15. 33. 17	10. 22. 31. 33	2. 44. 36	2. 12. 20
31	Tu.	10. 29. 23. 12	11. 6. 8. 25	1. 39. 1	1. 4. 38

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Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſcen. at Midn.	☽'s Declinat. at Noon.	☽'s Declinat. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	*Su.*	22	17. 35	292. 35	299. 55	17. 22 S	16. 28 S
2	M.	23	18. 30	307. 6	314. 7	15. 20	13. 59
3	Tu.	24	19. 21	320. 58	327. 39	12. 28	10. 47
4	W.	25	20. 10	334. 11	340. 35	8. 59	7. 6
5	Th.	26	20. 57	346. 52	353. 3	5. 9	3. 9 S
6	F.	27	21. 43	359. 9	5. 11	1. 8 S	0. 53 N
7	Sa.	28	22. 28	11. 11	17. 8	2. 52 N	4. 48
8	*Su.*	29	23. 13	23. 6	29. 3	6. 41	8. 28
9	M.	30	23. 59	35. 1	41. 1	10. 10	11. 44
10	Tu.	1	♂	47. 3	53. 6	13. 10	14. 28
11	W.	2	0. 45	59. 12	65. 20	15. 36	16. 33
12	Th.	3	1. 32	71. 30	77. 41	17. 20	17. 55
13	F.	4	2. 19	83. 54	90. 7	18. 18	18. 30
14	Sa.	5	3. 6	96. 21	102. 34	18. 29	18. 16
15	*Su.*	6	3. 53	108. 47	114. 59	17. 51	17. 14
16	M.	7	4. 40	121. 10	127. 19	16. 25	15. 26
17	Tu.	8	5. 27	133. 28	139. 36	14. 16	12. 55
18	W.	9	6. 14	145. 44	151. 52	11. 25	9. 47
19	Th.	10	7. 1	158. 2	164. 14	8. 0	6. 7
20	F.	11	7. 48	170. 29	176. 49	4. 7 N	2. 2 N
21	Sa.	12	8. 38	183. 14	189. 46	0. 7 S	2. 18 S
22	*Su.*	13	9. 29	196. 25	203. 14	4. 29	6. 39
23	M.	14	10. 23	210. 13	217. 23	8. 45	10. 45
24	Tu.	15	11. 21	224. 43	232. 14	12. 36	14. 16
25	W.	16	12. 21	239. 55	247. 44	15. 43	16. 53
26	Th.	17	13. 23	255. 39	263. 38	17. 46	18. 20
27	F.	18	14. 25	271. 37	279. 34	18. 34	18. 27
28	Sa.	19	15. 25	287. 24	295. 7	18. 2	17. 18
29	*Su.*	20	16. 22	302. 40	310. 2	16. 17	15. 2
30	M.	21	17. 16	317. 11	324. 9	13. 34	11. 56
31	Tu.	22	18. 7	330. 55	337. 31	10. 9	8. 16

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Mid.
		M. S.	M. S.	M. S.	M. S.		
1	*Su.*	16. 14	16. 9	59. 35	59. 15	4801	4826
2	M.	16. 3	15. 58	58. 55	58. 34	4850	4876
3	Tu.	15. 52	15. 46	58. 13	57. 52	4902	4928
4	W.	15. 41	15. 35	57. 33	57. 13	4952	4977
5	Th.	15. 31	15. 26	56. 55	56. 36	5000	5025
6	F.	15. 21	15. 16	56. 20	56. 3	5045	5067
7	Sa.	15. 12	15. 8	55. 48	55. 34	5086	5104
8	*Su.*	15. 5	15. 1	55. 21	55. 8	5122	5138
9	M.	14. 58	14. 55	54. 57	54. 46	5153	5167
10	Tu.	14. 53	14. 51	54. 37	54. 29	5179	5190
11	W.	14. 49	14. 47	54. 22	54. 16	5199	5207
12	Th.	14. 46	14. 45	54. 11	54. 8	5214	5218
13	F.	14. 45	14. 45	54. 7	54. 7	5219	5219
14	Sa.	14. 45	14. 46	54. 9	54. 12	5217	5213
15	*Su.*	14. 48	14. 50	54. 18	54. 27	5205	5193
16	M.	14. 53	14. 56	54. 37	54. 50	5179	5162
17	Tu.	15. 1	15. 5	55. 5	55. 22	5142	5120
18	W.	15. 11	15. 16	55. 42	56. 4	5094	5065
19	Th.	15. 23	15. 30	56. 28	56. 54	5035	5002
20	F.	15. 38	15. 46	57. 21	57. 50	4967	4931
21	Sa.	15. 53	16. 1	58. 18	58. 48	4896	4859
22	*Su.*	16. 9	16. 17	59. 16	59. 44	4824	4790
23	M.	16. 23	16. 29	60. 9	60. 32	4760	4733
24	Tu.	16. 35	16. 39	60. 51	61. 6	4710	4692
25	W.	16. 42	16. 44	61. 17	61. 24	4679	4671
26	Th.	16. 44	16. 43	61. 25	61. 22	4670	4673
27	F.	16. 41	16. 37	61. 13	61. 1	4684	4698
28	Sa.	16. 33	16. 28	60. 45	60. 25	4717	4741
29	*Su.*	16. 22	16. 15	60. 3	59. 39	4768	4797
30	M.	16. 8	16. 1	59. 14	58. 47	4827	4860
31	Tu.	15. 54	15. 47	58. 21	57. 55	4892	4924

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	α Pegaſi.	59. 7. 48	57. 29. 28	55. 51. 47	54. 14. 44
2		46. 20. 7	44. 47. 44	43. 16. 18	41. 45. 54
1	The Sun.	109. 28. 38	107. 49. 29	106. 10. 39	104. 32. 7
2		96. 23. 51	94. 47. 7	93. 10. 42	91. 34. 35
3		83. 38. 25	82. 4. 6	80. 30. 5	78. 56. 21
4		71. 11. 58	69. 39. 55	68. 8. 9	66. 36. 39
5		59. 3. 9	57. 33. 14	56. 3. 34	54. 34. 8
6		47. 10. 33	45. 42. 32	44. 14. 45	42. 47. 12
12	Regulus.	74. 30. 13	73. 1. 18	71. 32. 26	70. 3. 37
13		62. 40. 17	61. 11. 44	59. 43. 12	58. 14. 42
14		50. 52. 25	49. 23. 57	47. 55. 28	46. 26. 57
15		39. 3. 46	37. 34. 58	36. 6. 6	34. 37. 10
16		27. 11. 15	25. 41. 47	24. 12. 13	22. 42. 33
17		15. 12. 51			
17	Spica ♍	68. 43. 53	67. 12. 54	65. 41. 43	64. 10. 17
18		56. 29. 37	54. 56. 41	53. 23. 29	51. 49. 59
19		43. 58. 9	42. 22. 50	40. 47. 12	39. 11. 15
20		31. 6. 53	29. 29. 4	27. 51. 0	26. 12. 39
21		17. 58. 51			
21	Antares.	63. 48. 46	62. 8. 0	60. 26. 50	58. 45. 16
22		50. 12. 12	48. 28. 34	46. 44. 41	45. 0. 34
23		36. 17. 5	34. 32. 11	32. 47. 21	31. 2. 37
24	α Aquilæ.	72. 49. 46	71. 9. 39	69. 29. 34	67. 49. 34
25		59. 32. 23	57. 53. 57	56. 16. 2	54. 38. 41
26		46. 44. 14			
26	β Capricorni.	44. 26. 8	42. 32. 0	40. 37. 54	38. 43. 52
27		29. 15. 26	27. 22. 13	25. 29. 13	23. 36. 27
28		14. 16. 39			
28	α Pegaſi.	63. 48. 19	62. 5. 10	60. 22. 33	58. 40. 31
29		50. 20. 56	48. 43. 25	47. 6. 50	45. 31. 14
30		37. 51. 5	36. 23. 20	34. 57. 18	33. 33. 9
31	α Arietis.	65. 12. 49	63. 34. 7	61. 55. 54	60. 18. 10
J. 1		52. 16. 57			
30	The Sun.	113. 26. 11	111. 48. 27	110. 11. 7	108. 34. 9
31		100. 35. 10	99. 0. 32	97. 26. 17	95. 52. 24
J. 1		88. 8. 31			

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	α Pegaſi.	52. 38. 19	51. 2. 33	49. 27. 36	47. 53. 27
2		40. 16. 35			
1		102. 53. 52	101. 15. 55	99. 38. 15	98. 0. 54
2		89. 58. 46	88. 23. 14	86. 48. 0	85. 13. 3
3	The Sun.	77. 22. 55	75. 49. 45	74. 16. 53	72. 44. 17
4		65. 5. 25	63. 34. 28	62. 3. 46	60. 33. 20
5		53. 4. 57	51. 36. 0	50. 7. 17	48. 38. 48
6		41. 19. 54	39. 52. 49		
12		68. 34. 52	67. 6. 9	65. 37. 29	64. 8. 52
13		56. 46. 14	55. 17. 47	53. 49. 19	52. 20. 52
14	Regulus.	44. 58. 24	43. 29. 49	42. 1. 11	40. 32. 30
15		33. 8. 10	31. 39. 4	30. 9. 53	28. 40. 37
16		21. 12. 47	19. 42. 54	18. 12. 56	16. 42. 55
17		62. 38. 39	61. 6. 46	59. 34. 39	58. 2. 15
18	Spica ♍	50. 16. 13	48. 42. 9	47. 7. 47	45. 33. 7
19		37. 35. 0	35. 58. 25	34. 21. 33	32. 44. 22
20		24. 34. 5	22. 55. 21	21. 16. 32	19. 37. 41
21		57. 3. 21	55. 21. 3	53. 38. 26	51. 55. 29
22	Antares.	43. 16. 11	41. 31. 36	39. 46. 52	38. 2. 0
23		29. 18. 0			
23		79. 29. 28	77. 49. 45	76. 9. 52	74. 29. 51
24	α Aquilæ.	66. 9. 40	64. 29. 57	62. 50. 27	61. 11. 14
25		53. 2. 1	51. 26. 10	49. 51. 11	48. 17. 11
26	β Capri-	36. 49. 56	34. 56. 5	33. 2. 23	31. 8. 50
27	corni.	21. 43. 55	19. 51. 40	17. 59. 41	16. 8. 0
28		56. 59. 9	55. 18. 26	53. 38. 29	51. 59. 19
29	α Pegaſi.	43. 56. 43	42. 23. 21	40. 51. 13	39. 20. 26
30		32. 11. 2			
30	α Arietis.	71. 52. 16	70. 11. 43	68. 31. 37	66. 51. 59
31		58. 40. 55	57. 4. 10	55. 27. 55	53. 52. 11
29		120. 0. 58	118. 21. 41	116. 42. 48	115. 4. 18
30	The Sun.	106. 57. 35	105. 21. 24	103. 45. 36	102. 10. 11
31		94. 18. 54	92. 45. 46	91. 12. 59	89. 40. 34

Distances of ☽'s Center from Stars, and from ☉ west of her.

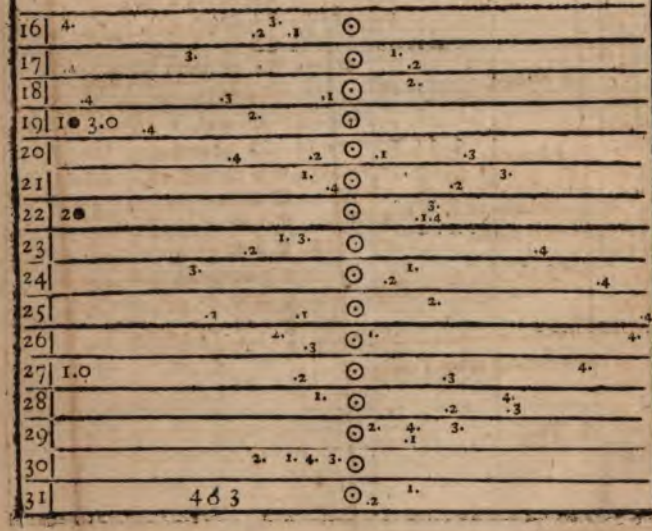
Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Antares.	45. 47. 9	47. 31. 2	49. 14. 45	50. 58. 19
2		59. 33. 19	61. 15. 38	62. 57. 43	64. 39. 34
3		73. 5. 6			
3	β Capricorni.	18. 34. 14	20. 16. 0	21. 57. 29	23. 38. 41
4		32. 0. 31	33. 40. 4	35. 19. 22	36. 58. 24
5		45. 9. 43	46. 47. 14	48. 24. 30	50. 1. 33
6	α Aquilæ.	64. 40. 54	66. 5. 28	67. 30. 7	68. 54. 49
7		75. 58. 24	77. 23. 3	78. 47. 37	80. 12. 9
8		87. 13. 26	88. 37. 21	90. 1. 7	
14	The Sun.	42. 36. 16	43. 57. 6	45. 18. 0	46. 38. 57
15		53. 24. 41	54. 46. 4	56. 7. 32	57. 29. 6
16		64. 18. 42	65. 41. 0	67. 3. 29	68. 26. 7
17		75. 22. 10	76. 45. 59	78. 10. 1	79. 34. 17
18		86. 39. 23	88. 5. 14	89. 31. 23	90. 57. 50
19		98. 14. 53	99. 43. 20	101. 12. 8	102. 41. 19
20		110. 12. 45	111. 44. 15	113. 16. 10	114. 48. 30
18	Pollux.	35. 7. 55	36. 36. 11	38. 5. 4	39. 34. 33
19		47. 10. 20	48. 43. 6	50. 16. 20	51. 50. 5
20	Regulus.	22. 57. 14	24. 35. 48	26. 14. 51	27. 54. 22
21		36. 18. 50	38. 1. 8	39. 43. 54	41. 27. 8
22		50. 10. 9	51. 56. 7	53. 42. 32	55. 29. 22
23		64. 29. 54			
23	Spica ♍	11. 46. 49	13. 28. 33	15. 12. 14	16. 57. 34
24		25. 59. 13	27. 49. 33	29. 40. 21	31. 31. 33
25		40. 52. 29	42. 45. 26	44. 38. 32	46. 31. 48
26		55. 59. 29	57. 53. 7	59. 46. 42	61. 40. 16
27		71. 6. 40			
27	Antares.	20. 37. 18	28. 23. 15	30. 9. 44	31. 56. 40
28		40. 54. 56	42. 42. 46	44. 30. 32	46. 18. 11
29		55. 13. 36	56. 59. 57	58. 46. 1	60. 31. 48
30		69. 15. 44			
30	β Capricorni.	14. 44. 35	16. 29. 48	18. 14. 39	19. 59. 6
31		28. 35. 39	30. 17. 48	31. 59. 35	33. 41. 0
J. 1		42. 2. 31			

Distances of ☽'s Center from Stars, and from ☉ west of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Antares.	52. 41. 43	54. 24. 56	56. 7. 56	57. 50. 44
2		66. 21. 10	68. 2. 31	69. 43. 38	71. 24. 29
3	β Capricorni.	25. 19. 36	27. 0. 14	28. 40. 36	30. 20. 42
4		38. 37. 11	40. 15. 42	41. 53. 57	43. 31. 57
5		51. 38. 21			
5	α Aquilæ.	59. 3. 47	60. 27. 50	61. 52. 4	63. 16. 26
6		70. 19. 33	71. 44. 17	73. 9. 0	74. 33. 43
7		81. 36. 36	83. 0. 58	84. 25. 14	85. 49. 23
13	The Sun.			39. 54. 42	41. 15. 28
14		47. 59. 57	49. 21. 1	50. 42. 10	52. 3. 23
15		58. 50. 47	60. 12. 34	61. 34. 29	62. 56. 32
16		69. 48. 56	71. 11. 56	72. 35. 9	73. 58. 33
17		80. 58. 47	82. 23. 32	83. 48. 33	85. 13. 50
18		92. 24. 36	93. 51. 40	95. 19. 4	96. 46. 48
19		104. 10. 51	105. 40. 44	107. 11. 1	108. 41. 41
20		116. 21. 14	117. 54. 23	119. 27. 57	121. 1. 56
18	Pollux.	41. 4. 37	42. 35. 14	44. 6. 24	45. 38. 6
19		53. 24. 19			
19	Regulus.	16. 28. 12	18. 4. 38	19. 41. 38	21. 19. 10
20		29. 34. 20	31. 14. 46	32. 55. 39	34. 37. 0
21		43. 10. 50	44. 54. 59	46. 39. 35	48. 24. 38
22		57. 16. 39	59. 4. 21	60. 52. 27	62. 40. 59
23	Spica ♍	18. 44. 13	20. 31. 50	22. 20. 18	24. 9. 27
24		33. 23. 7	35. 15. 2	37. 7. 16	38. 59. 45
25		48. 25. 13	50. 18. 42	52. 12. 15	54. 5. 51
26		63. 33. 46	65. 27. 10	67. 20. 28	69. 13. 39
27	Antares.	33. 43. 58	35. 31. 31	37. 19. 15	39. 7. 4
28		48. 5. 41	49. 53. 0	51. 40. 5	53. 26. 57
29		62. 17. 16	64. 2. 25	65. 47. 12	67. 31. 39
30	β Capricorni.	21. 43. 11	23. 26. 52	25. 10. 11	26. 53. 6
31		35. 22. 2	37. 2. 42	38. 43. 0	40. 22. 56

Configurations of the SATELLITES of JUPITER at ½ Hour past 3 o' th' Clock in the Morning.

JUPITER's Satellites will not be visible the Beginning of this Month, being too near the SUN.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	W.	Nicomede, Oxf. Term
2	Th.	[begins.
3	F.	Trinity Term begins.
4	Sa.	*K. George* III. *born.*
5	*Su.*	*1ſt Sunday after Trinity.*
6	M.	In 8 days of H. Trinity,
7	Tu.	[2 ret.
8	W.	
9	Th.	
10	F.	*Prs. Amelia born.*
11	Sa.	*St. Barnabas.*
12	*Su.*	*2d Sunday after Trinity.*
13	M.	In 15 days of H. Trin.
14	Tu.	[3 ret.
15	W.	
16	Th.	
17	F.	S. Alban.
18	Sa.	
19	*Su.*	*3d Sunday after Trinity.*
20	M.	Tr. Ed. K. W. S. In 3
21	Tu.	[weeks of H. Tr. 4 ret.
22	W.	Term ends.
23	Th.	
24	F.	*Nativ. of St. John Bapt.*
25	Sa.	
26	*Su.*	*4th Sunday after Trinity.*
27	M.	
28	Tu.	
29	W.	*St. Peter.*
30	Th.	

Phaſes of the Moon.

	D.	H.	M.
New Moon —	8.	18.	20
Firſt Quarter—	16.	19.	20
Full Moon —	23.	11.	57
Laſt Quarter —	30.	6.	59

Other Phenomena.

D.

7. ☾ ☌ ♉ 10^h. 39′.
☾ 1 ad ☍ ♉ 12^h. 48′.
☾ 2 ad ☍ ♉ 13^h. 19′.
☾ ☌ ♉ 18^h. 41′.

12. ☿ ☌ ♀ diff. Lat. 1°. 33′.

13. ☾ ☌ ☊ 19^h. 20′.

14. ☿ inf. cor. Bor. ♉ diff. Lat. 4′.
☾ ☌ ☊ 0^h. 29′.

16. ☾ ☌ ☊ 5^h. 1′.
☾ ☍ ♍ 15^h. 29′.

17. ☾ ☌ ♍ 5^h. 41′.

18. ☾ ☌ ♍ 5^h. 44′.

19. ☿ ☌ ♊ diff. Lat. 14′.
☾ ☌ ♍ Im. 9^h. 40′. Em. 9^h. 53′, * 16′ N. of ☽'s center.

20. ☾ ☌ ♎ 20^h. 0′.
☉ enters ♋ at 22^h. 57′.
☾ ☌ ♎ 23^h. 38′.

21. ☾ ☌ ♎ 3^h. 40′.
☾ ☌ Serpent. 17^h. 43′.

25. ☾ ☍ ♑ 8^h. 58′.

27. ☾ ☌ ♒ 23^h. 42′.

28. ☾ ☌ ♓ 9^h. 30′.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declin. North.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	W.	2. 10. 56. 4	4. 37. 25,2	22. 6 31	2. 38,9	9,1
2	Th.	2. 11. 53. 29	4. 41. 30,9	22.14.23	2. 29,8	9,5
3	F.	2. 12. 50. 54	4. 45. 37,0	22.21.52	2. 20,3	10,0
4	Sa.	2. 13. 48. 19	4. 49. 43,6	22.28.58	2. 10,3	10,3
5	*Su.*	2. 14. 45. 43	4. 53. 50,5	22.35.40	2. 0,0	10,6
6	M.	2. 15. 43. 6	4. 57. 57,7	22.41.59	1. 49,4	11,0
7	Tu.	2. 16. 40. 29	5. 2. 5,2	22.47.53	1. 38,4	11,3
8	W.	2. 17. 37. 51	5. 6. 13,1	22.53.24	1. 27,1	11,6
9	Th.	2. 18. 35. 13	5. 10. 21,2	22.58.31	1. 15,5	11,8
10	F.	2. 19. 32. 34	5. 14. 29,6	23. 3.13	1. 3,7	12,0
11	Sa.	2. 20. 29. 54	5. 18. 38,3	23. 7.31	0. 51,7	12,2
12	*Su.*	2. 21. 27. 13	5. 22. 47,0	23.11.25	0. 39,5	12,4
13	M.	2. 22. 24. 32	5. 26. 56,0	23.14.54	0. 27,1	12,5
14	Tu.	2. 23. 21. 49	5. 31. 5,1	23.17.58	0. 14,6	12,6
15	W.	2. 24. 19. 6	5. 35. 14,4	23.20.38	0. 2,0	12,8
16	Th.	2. 25. 16. 22	5. 39. 23,7	23.22.53	Ad: 10,8	12,8
17	F.	2. 26. 13. 37	5. 43. 33,1	23.24.44	0. 23,6	12,9
18	Sa.	2. 27. 10. 52	5. 47. 42,6	23.26.10	0. 36,5	12,9
19	*Su.*	2. 28. 8. 5	5. 51. 52,0	23.27.11	0. 49,4	12,8
20	M.	2. 29. 5. 18	5. 56. 1,5	23.27.47	1. 2,2	12,9
21	Tu.	3. 0. 2. 31	6. 0. 11,0	23.27.58	1. 15,1	12,9
22	W.	3. 0. 59. 43	6. 4. 20,4	23.27.45	1. 28,0	12,7
23	Th.	3. 1. 56. 54	6. 8. 29,7	23.27. 6	1. 40,7	12,7
24	F.	3. 2. 54. 5	6. 12. 39,0	23.26. 3	1. 53,4	12,6
25	Sa.	3. 3. 51. 16	6. 16. 48,2	23.24.35	2. 6,0	12,5
26	*Su.*	3. 4. 48. 27	6. 20. 57,3	23.22.43	2. 18,5	12,4
27	M.	3. 5. 45. 38	6. 25. 6,2	23.20.26	2. 30,9	12,2
28	Tu.	3. 6. 42. 49	6. 29. 15,1	23.17.45	2. 43,1	12,1
29	W.	3. 7. 40. 1	6. 33. 23,7	23.14.38	2. 55,2	11,9
30	Th.	3. 8. 37. 13	6. 37. 32,2	23.11. 8	3. 7,1	

Days	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 48, 3	1. 8, 3	2. 23, 6	0. 006363	5. 18. 4
7	15. 48, 1	1. 8, 6	2. 23, 3	0. 006696	5. 17. 45
13	15. 47, 5	1. 8, 7	2. 23, 2	0. 006936	5. 17. 26
19	15. 47, 1	1. 8, 8	2. 23, 0	0. 007093	5. 17. 7
25	15. 46, 9	1. 8, 8	2. 23, 0	0. 007189	5. 16. 48

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Immersions.		II. Satellite. Immersions.		III. Satellite.	
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.
1	18. 23. 23	1	5. 20. 14	5	13. 14. 48 I
3	12. 51. 40	4	18. 37. 25	5	15. 1. 9 E
5	7. 19. 55	8	7. 54. 39	12	17. 14. 45 I
7	1. 48. 13	11	21. 11. 52	12	19. 0. 0 E
8	20. 16. 26	15	10. 29. 5	19	21. 14. 25 I
10	14. 44. 41	18	23. 46. 15	19	22. 58. 35 E
12	9. 12. 50	22	13. 3. 27	27	1. 14. 4 I
14	3. 41. 5	26	2. 20. 35	27	2. 57. 10 E
15	22. 9. 14	29	15. 37. 52		
17	16. 37. 25			IV. Satellite. Conj.	
19	11. 5. 35				
21	5. 33. 46			6	10. 30. 42 Inf.
23	0. 1. 52			14	19. 57. 5 Sup.
24	18. 29. 59			23	4. 38. 53 Inf.
26	12. 58. 12				
28	7. 26. 24				
30	1. 54. 30				

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſ. over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Sup. ☌ 13d 10h.						
1	0. 9. 16	4. 10 S	1. 26. 40	1. 10 S	18. 18 N	23. 5
7	1. 12. 52	0. 22 S	2. 8. 52	0. 5 S	21. 44	23. 32
13	2. 20. 14	3. 58 N	2. 21. 54	0. 55 N	24. 8	0. 0
19	3. 26. 59	6. 37	3. 4. 55	1. 38	25. 1	0. 30
25	4. 29. 5	6. 48	3. 17. 9	1. 55	24. 16	0. 59
VENUS.						
1	9. 24. 36	2. 11 S	0. 25. 7	2. 16 S	7. 37 N	20. 59
7	10. 4. 5	2. 35	1. 1. 0	2. 30	9. 30	20. 57
13	10. 13. 34	2. 54	1. 7. 4	2. 39	11. 23	20. 55
19	10. 23. 4	3. 9	1. 13. 18	2. 43	13. 14	20. 55
25	11. 2. 34	3. 19	1. 19. 41	2. 42	15. 4	20. 55
MARS.						
1	0. 23. 40	0. 46 S	1. 13. 4	0. 29 S	15. 19 N	22. 4
7	0. 27. 12	0. 40	1. 17. 26	0. 26	16. 39	21. 57
13	1. 0. 43	0. 34	1. 21. 47	0. 22	17. 53	21. 50
19	1. 4. 12	0. 27	1. 26. 5	0. 18	19. 1	21. 42
25	1. 7. 39	0. 20	2. 0. 21	0. 14	20. 2	21. 35
JUPITER.						
1	0. 26. 57	1. 15 S	1. 4. 0	1. 5 S	11. 51 N	21. 28
7	0. 27. 30	1. 15	1. 5. 16	1. 5	12. 16	21. 8
13	0. 28. 2	1. 15	1. 6. 30	1. 6	12. 40	20. 48
19	0. 28. 35	1. 14	1. 7. 41	1. 7	13. 2	20. 28
25	0. 29. 8	1. 14	1. 8. 48	1. 7	13. 23	20. 7
SATURN. □ 10d. 3h.						
1	5. 25. 32	2. 15 N	5. 19. 27	2. 18 N	6. 18 N	6. 46
7	5. 25. 44	2. 15	5. 19. 35	2. 17	6. 14	6. 22
13	5. 25. 57	2. 16	5. 19. 47	2. 16	6. 8	5. 58
19	5. 26. 9	2. 16	5. 20. 3	2. 14	6. 0	5. 34
25	5. 26. 21	2. 16	5. 20. 21	2. 13	5. 52	5. 10

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	W.	11. 12. 47. 33	11. 19. 20. 55	0. 29. 50 N	0. 4. 50 S
2	Th.	11. 25. 49. 2	0. 2. 12. 25	0. 38. 57 S	1. 12. 10
3	F.	0. 8. 31. 26	0. 14. 46. 38	1. 44. 5	2. 14. 21
4	Sa.	0. 20. 58. 24	0. 27. 7. 22	2. 42. 47	3. 9. 0
5	*Su.*	1. 3. 13. 41	1. 9. 17. 52	3. 32. 51	3. 54. 4
6	M.	1. 15. 20. 12	1. 21. 21. 1	4. 12. 36	4. 28. 7
7	Tu.	1. 27. 20. 30	2. 3. 19. 1	4. 40. 38	4. 50. 0
8	W.	2. 9. 16. 31	2. 15. 13. 29	4. 56. 10	4. 59. 4
9	Th.	2. 21. 9. 52	2. 27. 5. 55	4. 58. 44	4. 55. 11
10	F.	3. 3. 1. 45	3. 8. 57. 42	4. 48. 20	4. 38. 25
11	Sa.	3. 14. 53. 46	3. 20. 50. 25	4. 25. 24	4. 9. 32
12	*Su.*	3. 26. 47. 45	4. 2. 46. 13	3. 50. 49	3. 29. 31
13	M.	4. 8. 46. 4	4. 14. 47. 54	3. 5. 48	2. 39. 50
14	Tu.	4. 20. 51. 54	4. 26. 58. 47	2. 11. 49	1. 42. 7
15	W.	5. 3. 9. 0	5. 9. 22. 59	1. 10. 53	0. 38. 26 S
16	Th.	5. 15. 41. 25	5. 22. 4. 49	0. 5. 9 S	0. 28. 39 N
17	F.	5. 28. 33. 49	6. 5. 8. 50	1. 2. 35 N	1. 36. 12
18	Sa.	6. 11. 50. 22	6. 18. 38. 37	2. 9. 4	2. 40. 39
19	*Su.*	6. 25. 34. 8	7. 2. 36. 50	3. 10. 24	3. 37. 51
20	M.	7. 9. 46. 44	7. 17. 3. 36	4. 2. 11	4. 23. 5
21	Tu.	7. 24. 26. 59	8. 1. 55. 58	4. 39. 56	4. 52. 10
22	W.	8. 9. 29. 46	8. 17. 7. 11	4. 59. 26	5. 1. 28
23	Th.	8. 24. 46. 45	9. 2. 27. 3	4. 58. 7	4. 49. 23
24	F.	9. 10. 6. 44	9. 17. 44. 10	4. 35. 27	4. 16. 38
25	Sa.	9. 25. 17. 59	10. 2. 47. 11	3. 53. 24	3. 26. 22
26	*Su.*	10. 10. 10. 41	10. 17. 27. 41	2. 56. 7	2. 23. 24
27	M.	10. 24. 37. 46	11. 1. 40. 38	1. 48. 53	1. 13. 12
28	Tu.	11. 8. 36. 17	11. 15. 24. 52	0. 36. 59 N	0. 0. 50 N
29	W.	11. 22. 6. 24	11. 28. 41. 32	0. 34. 44 S	1. 9. 18 S
30	Th.	0. 5. 10. 34	0. 11. 34. 6	1. 42. 23	2. 13. 44

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	W.	23	18. 54	343. 57	350. 15	6. 18 S	4. 18 S
2	Th.	24	19. 40	356. 25	2. 30	2. 16 S	0. 13 S
3	F.	25	20. 25	8. 31	14. 28	1. 47 N	3. 46 N
4	Sa.	26	21. 10	20. 24	26. 19	5. 41	7. 31
5	*Su.*	27	21. 55	32. 14	38. 10	9. 16	10. 54
6	M.	28	22. 40	44. 7	50. 7	12. 25	13. 48
7	Tu.	29	23. 26	56. 9	62. 15	15. 2	16. 6
8	W.	1	♂	68. 22	74. 32	16. 59	17. 41
9	Th.	2	0. 13	80. 44	86. 57	18. 12	18. 31
10	F.	3	1. 0	93. 11	99. 25	18. 38	18. 32
11	Sa.	4	1. 47	105. 39	111. 52	18. 14	17. 44
12	*Su.*	5	2. 34	118. 4	124. 14	17. 3	16. 10
13	M.	6	3. 21	130. 22	136. 28	15. 6	13. 52
14	Tu.	7	4. 7	142. 33	148. 36	12. 28	10. 56
15	W.	8	4. 52	154. 39	160. 43	9. 16	7. 28
16	Th.	9	5. 38	166. 48	172. 55	5. 34	3. 36 N
17	F.	10	6. 25	179. 6	185. 22	1. 32 N	0. 35 S
18	Sa.	11	7. 14	191. 44	198. 13	2. 42 S	4. 50
19	*Su.*	12	8. 4	204. 52	211. 40	6. 56	8. 59
20	M.	13	8. 58	218. 40	225. 52	10. 56	12. 44
21	Tu.	14	9. 56	233. 15	240. 50	14. 23	15. 48
22	W.	15	10. 57	248. 36	256. 31	16. 58	17. 50
23	Th.	16	12. 0	264. 31	272. 35	18. 24	18. 37
24	F.	17	13. 2	280. 38	288. 38	18. 30	18. 3
25	Sa.	18	14. 3	296. 31	304. 16	17. 17	16. 13
26	*Su.*	19	15. 0	311. 49	319. 10	14. 53	13. 20
27	M.	20	15. 54	326. 19	333. 15	11. 37	9. 45
28	Tu.	21	16. 44	340. 0	346. 34	7. 47	5. 45
29	W.	22	17. 32	352. 59	359. 16	3. 40 S	1. 35 S
30	Th.	23	18. 18	5. 26	11. 30	0. 30 N	2. 32 N

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	W.	15. 40	15. 33	57. 29	57. 5	4957	4987
2	Th.	15. 27	15. 21	56. 42	56. 20	5017	5045
3	F.	15. 16	15. 10	56. 0	55. 42	5071	5094
4	Sa.	15. 6	15. 2	55. 24	55. 10	5118	5136
5	*Su.*	14. 58	14. 55	54. 56	54. 44	5154	5170
6	M.	14. 52	14. 50	54. 34	54. 25	5183	5195
7	Tu.	14. 48	14. 46	54. 18	54. 12	5205	5213
8	W.	14. 45	14. 44	54. 7	54. 4	5219	5223
9	Th.	14. 43	14. 43	54. 2	54. 2	5226	5226
10	F.	14. 43	14. 44	54. 2	54. 4	5226	5223
11	Sa.	14. 45	14. 46	54. 8	54. 13	5218	5211
12	*Su.*	14. 48	14. 51	54. 20	54. 28	5202	5191
13	M.	14. 53	14. 57	54. 38	54. 51	5178	5161
14	Tu.	15. 0	15. 5	55. 5	55. 21	5142	5122
15	W.	15. 9	15. 15	55. 39	55. 59	5098	5072
16	Th.	15. 21	15. 27	56. 21	56. 45	5044	5013
17	F.	15. 35	15. 42	57. 10	57. 37	4981	4947
18	Sa.	15. 50	15. 57	58. 5	58. 33	4912	4877
19	*Su.*	16. 5	16. 13	59. 1	59. 29	4843	4809
20	M.	16. 20	16. 26	59. 55	60. 20	4777	4747
21	Tu.	16. 32	16. 38	60. 42	61. 1	4721	4698
22	W.	16. 42	16. 45	61. 16	61. 26	4680	4669
23	Th.	16. 46	16. 46	61. 32	61. 33	4661	4660
24	F.	16. 45	16. 43	61. 28	61. 19	4666	4677
25	Sa.	16. 39	16. 34	61. 5	60. 47	4693	4715
26	*Su.*	16. 28	16. 21	60. 25	60. 1	4741	4770
27	M.	16. 14	16. 6	59. 34	59. 6	4802	4837
28	Tu.	15. 58	15. 51	58. 37	58. 8	4872	4908
29	W.	15. 43	15. 35	57. 40	57. 12	4943	4979
30	Th.	15. 28	15. 21	56. 45	56. 21	5013	5044

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		88. 8. 31	86. 36. 50	85. 5. 30	83. 34. 30
2		76. 4. 30	74. 35. 27	73. 6. 41	71. 38. 14
3	The Sun.	64. 20. 13	62. 53. 26	61. 26. 54	60. 0. 37
4		52. 52. 50	51. 27. 56	50. 3. 14	48. 38. 44
5		41. 39. 28	40. 16. 13	38. 53. 8	
11		42. 2. 29	40. 33. 43	39. 4. 54	37. 36. 3
12	Regulus.	30. 11. 3	28. 41. 52	27. 12. 37	25. 43. 19
13		18. 15. 56	16. 46. 21	15. 16. 45	13. 47. 9
14		59. 47. 16	58. 16. 3	56. 44. 39	55. 13. 3
15		47. 32. 5	45. 59. 17	44. 26. 15	42. 53. 0
16	Spica ♍	35. 3. 13	33. 28. 35	31. 53. 43	30. 18. 38
17		22. 20. 36	20. 44. 44	19. 8. 58	17. 33. 22
18		55. 8. 34	53. 29. 2	51. 49. 11	50. 9. 3
19	Antares.	41. 44. 5	40. 2. 23	38. 20. 32	36. 38. 36
20		28. 9. 9			
20		78. 16. 39	76. 39. 23	75. 1. 52	73. 24. 10
21	α Aquilæ.	65. 14. 23	63. 36. 30	61. 58. 45	60. 21. 12
22		52. 18. 44	50. 43. 53	49. 9. 50	47. 36. 42
23	β Capri-	35. 59. 37	34. 5. 2	32. 10. 25	30. 15. 48
24	corni.	20. 43. 18			
24		69. 50. 48	68. 4. 13	66. 17. 57	64. 32. 3
25	α Pegaſi.	55. 49. 48	54. 7. 7	52. 25. 10	50. 44. 0
26		42. 32. 28	40. 57. 39	39. 24. 16	37. 52. 25
27		69. 52. 11	68. 8. 59	66. 26. 18	64. 44. 9
28	α Arietis.	56. 21. 31	54. 42. 42	53. 4. 29	51. 26. 55
29		43. 29. 9	41. 55. 45	40. 23. 7	38. 51. 19
30		31. 26. 41	30. 1. 10	28. 37. 2	27. 14. 22
28		118. 6. 26	116. 30. 50	114. 55. 39	113. 20. 53
29	The Sun.	105. 33. 34	104. 1. 20	102. 29. 29	100. 58. 2
30		93. 26. 34	91. 57. 22	90. 28. 30	88. 59. 59
J. 1		81. 42. 24			

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	82. 3. 51	80. 33. 32	79. 3. 32	77. 33. 52
2		70. 10. 4	68. 42. 12	67. 14. 36	65. 47. 16
3		58. 34. 35	57. 8. 48	55. 43. 15	54. 17. 56
4		47. 14. 27	45. 50. 24	44. 26. 33	43. 2. 55
10	Regulus.	47. 57. 9	46. 28. 33	44. 59. 54	43. 31. 13
11		36. 7. 9	34. 38. 13	33. 9. 13	31. 40. 10
12		24. 13. 57	22. 44. 31	21. 15. 2	19. 45. 30
13		12. 17. 32			
13	Spica ♍	65. 50. 22	64. 19. 51	62. 49. 10	61. 18. 18
14		53. 41. 16	52. 9. 17	50. 37. 5	49. 4. 41
15		41. 19. 31	39. 45. 47	38. 11. 49	36. 37. 38
16		28. 43. 20	27. 7. 51	25. 32. 13	23. 56. 27
17		15. 58. 3			
17	Antares.	61. 43. 34	60. 5. 18	58. 26. 43	56. 47. 48
18		48. 28. 37	46. 47. 51	45. 6. 49	43. 25. 33
19		34. 56. 37	33. 14. 38	31. 32. 42	29. 50. 51
20	∝ Aquilæ.	71. 46. 19	70. 8. 20	68. 30. 22	66. 52. 21
21		58. 43. 54	57. 6. 55	55. 30. 21	53. 54. 15
22		46. 4. 37			
22	♑ Capricorni.	43. 37. 16	41. 43. 0	39. 48. 37	37. 54. 9
23		28. 21. 11	26. 26. 37	24. 32. 5	22. 37. 39
24	♒ Pegaſi.	62. 46. 34	61. 1. 32	59. 17. 3	57. 33. 9
25		49. 3. 40	47. 24. 16	45. 45. 52	44. 8. 34
26		36. 22. 14			
26	∝ Arietis.	76. 49. 52	75. 4. 44	73. 20. 4	71. 35. 53
27		63. 2. 31	61. 21. 26	59. 40. 53	58. 0. 55
28		49. 49. 59	48. 13. 43	46. 38. 9	45. 3. 17
29		37. 20. 23	35. 50. 23	34. 21. 23	32. 53. 27
30		25. 53. 22			
27	The Sun.			121. 18. 55	119. 42. 28
28		111. 46. 33	110. 12. 41	108. 39. 14	107. 6. 12
29		99. 26. 58	97. 56. 19	96. 26. 2	94. 56. 7
30		87. 31. 49	86. 3. 59	84. 36. 28	83. 9. 17

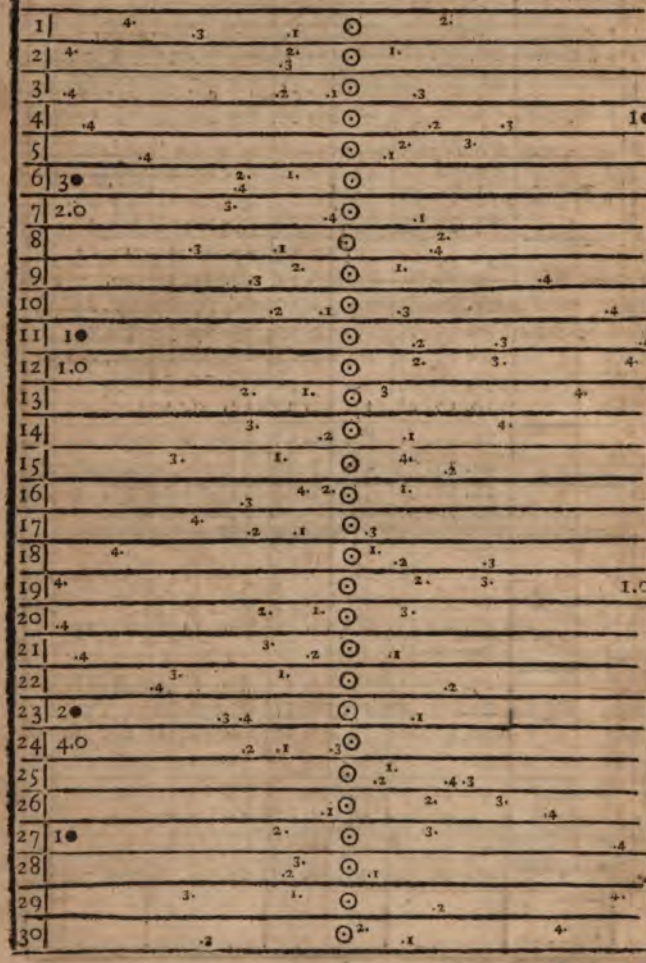
Diſtances of Moon's Center from Stars, and from ☉ weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	β Capri-	42. 2. 31	43. 41. 44	45. 20. 36	46. 59. 7
2	corni.	55. 6. 50			
2		62. 11. 38	63. 36. 20	65. 1. 3	66. 25. 46
3	ζ Aquilæ.	73. 29. 4	74. 53. 34	76. 17. 58	77. 42. 17
4		84. 42. 8	86. 5. 43	87. 29. 10	88. 52. 29
5		47. 59. 42	49. 21. 23	50. 43. 20	52. 5. 32
6	α Pegaſi.	58. 59. 17	60. 22. 25	61. 45. 39	63. 8. 58
7		70. 6. 33			
12					39. 35. 58
13		46. 26. 19	47. 48. 53	49. 11. 37	50. 34. 32
14		57. 31. 42	58. 55. 43	60. 19. 57	61. 44. 24
15	The Sun.	68. 50. 11	70. 16. 4	71. 42. 13	73. 8. 38
16		80. 25. 3	81. 53. 15	83. 21. 47	84. 50. 39
17		92. 20. 11	93. 51. 11	95. 22. 33	96. 54. 18
18		104. 38. 52	106. 12. 58	107. 47. 28	109. 22. 22
19		117. 23. 19	119. 0. 46	120. 38. 36	
17		31. 52. 24	33. 30. 40	35. 9. 20	36. 48. 24
18	Regulus.	45. 9. 53	46. 51. 23	48. 33. 19	50. 15. 41
19		58. 54. 4	60. 39. 3	62. 24. 27	64. 10. 16
20		20. 0. 48	21. 46. 6	23. 32. 17	25. 19. 14
21	Spica ♍	34. 23. 0	36. 13. 14	38. 3. 53	39. 54. 55
22		49. 15. 15	51. 8. 12	53. 1. 23	54. 54. 47
23		64. 23. 59	66. 18. 8	68. 12. 19	70. 6. 32
24		34. 40. 49	36. 30. 27	38. 20. 22	40. 10. 27
25	Antares.	49. 21. 36	51. 11. 41	53. 1. 36	54. 51. 21
26		63. 56. 38	65. 44. 49	67. 32. 39	69. 20. 9
27		78. 12. 3			
27	β Capri-	23. 51. 8	25. 37. 45	27. 23. 56	29. 9. 41
28	corni.	37. 51. 57	39. 35. 7	41. 17. 50	43. 0. 8
29		51. 24. 56			
29		59. 5. 54	60. 32. 23	61. 58. 53	63. 25. 22
30	α Aquilæ.	70. 37. 8	72. 3. 12	73. 29. 8	74. 54. 55
J. 1		82. 1. 15			

Distances of ☽'s center from Stars, and from ☉ west of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	β Capric.	48. 37. 18	50. 15. 9	51. 52. 42	53. 29. 55
2		67. 50. 30	69. 15. 12	70. 39. 52	72. 4. 29
3	α Aquilæ	79. 6. 30	80. 30. 36	81. 54. 34	83. 18. 25
4		90. 15. 40			
4		42. 36. 22	43. 56. 38	45. 17. 18	46. 38. 20
5	α Pegasi.	53. 27. 58	54. 50. 34	56. 13. 19	57. 36. 14
6		64. 32. 23	65. 55. 52	67. 19. 23	68. 42. 57
12		40. 57. 44	42. 19. 39	43. 41. 43	45. 3. 56
13		51. 57. 37	53. 20. 52	54. 44. 17	56. 7. 54
14		63. 9. 5	64. 34. 0	65. 59. 9	67. 24. 33
15	The Sun.	74. 35. 19	76. 2. 18	77. 29. 35	78. 57. 10
16		86. 19. 51	87. 49. 24	89. 19. 18	90. 49. 34
17		98. 26. 25	99. 58. 56	101. 31. 51	103. 5. 10
18		110. 57. 42	112. 33. 28	114. 9. 40	115. 46. 17
16		25. 23. 12	26. 59. 55	28. 37. 2	30. 14. 31
17	Regulus.	38. 27. 53	40. 7. 46	41. 48. 4	43. 28. 46
18		51. 58. 28	53. 41. 43	55. 25. 24	57. 9. 31
19		65. 56. 31			
19		13. 11. 24	14. 51. 30	16. 33. 15	18. 16. 27
20		27. 6. 52	28. 55. 7	30. 43. 55	32. 33. 13
21	Spica ♍	41. 46. 19	43. 38. 5	45. 30. 10	47. 22. 34
22		56. 48. 21	58. 42. 4	60. 35. 56	62. 29. 55
23		72. 0. 45			
23		27. 26. 53	29. 14. 26	31. 2. 40	32. 51. 30
24	Antares.	42. 0. 40	43. 50. 55	45. 41. 11	47. 31. 25
25		56. 40. 56	58. 30. 16	60. 19. 19	62. 8. 7
26		71. 7. 19	72. 54. 6	74. 40. 29	76. 26. 28
27	ρ Capri-	30. 55. 0	32. 39. 53	34. 24. 20	36. 8. 22
28	corni.	44. 41. 59	46. 23. 24	48. 4. 21	49. 44. 52
29	α Aquilæ.	64. 51. 51	66. 18. 17	67. 44. 39	69. 10. 56
30		76. 20. 34	77. 46. 2	79. 11. 18	80. 36. 23

Configurations of the SATELLITES of JUPITER at 3 o'th' Clock in the Morning.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	F.	
2	Sa.	Viſitation of V. Mary.
3	*Su.*	*5th Sunday after Trinity.*
4	M.	Tranſl. of S. Martin.
5	Tu.	Camb. Commencement.
6	W.	
7	Th.	
8	F.	Camb. Term ends.
9	Sa.	
10	*Su.*	*6th Sunday after Trinity.*
11	M.	Oxford Act.
12	Tu.	
13	W.	
14	Th.	
15	F.	Swithin.
16	Sa.	Oxf. Term ends.
17	*Su.*	*7th Sunday after Trinity.*
18	M.	
19	Tu.	
20	W.	Margaret.
21	Th.	
22	F.	*Q. of Denmark born* 1751.
23	Sa.	[Magdalen.
24	*Su.*	*8th Sunday after Trinity.*
25	M.	*St. James.*
26	Tu.	St. Anne.
27	W.	
28	Th.	
29	F.	
30	Sa.	
31	*Su.*	*9th Sunday after Trinity.*

Phaſes of the Moon.

	D.	H.	M.
New Moon —	8.	9.	17
Firſt Quarter —	16.	4.	36
Full Moon —	22.	18.	41
Laſt Quarter —	29.	20.	17

Other Phenomena.

D.

4. ☾ ☌ ♉ Im. 15h. 5′. * 3′½ S. of ☽'s cent. Em. 16h. 3′. * 5′ S.
☾ 1 ad ☍ ♉ 18h. 36′.
☾ 2 ad ☍ ♉ 19h. 7′.

5. ☾ ☌ ♉ Im. 1h. 6′. * 1′½ N. of ☽'s cent. Em. 2h. 14′. * 3′ N.

9. ♀ ☌ ♉ diff. Lat. 12′.

11. ☾ ☌ ♌ 0h. 56′.

12. ☾ ☌ ♌ 5h. 47′.

13. ☾ ☌ ♌ 10h. 53′.
☾ ☌ ♍ 21h. 28′.

14. ☾ ☌ ♍ 11h. 56′.
☾ ☌ ♍ 21h. 48′.

15. ☾ ☌ ♍ 12h. 31′.

16. ♀ ☌ ♉ diff. Lat. 54′.
☾ ☌ ♍ 17h. 25′.

18. ☾ ☌ ♎ 4h. 42′.
☾ ☌ ♎ Im. 7h. 43′. * 7′. N. of ☽'s cent. Em. 8h. 49′. * 8′ N.

20. ☿ ☌ ♀ diff. Lat. 2°. 4′.

22. ☉ enters ♌ at 9h. 48′.
☾ ☌ ♑ 19h. 34′.

23. ♀ ☌ ♉ diff. Lat. 23′.

25. ☿ ☌ ♌ diff. Lat. 39′.

31. ♀ ☌ ♊ diff. Lat. 34′.
☾ ☌ ♉ 22h. 52′.

JULY 1774.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declina. North.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	F.	3. 9. 34. 24	6. 41. 40,5	23. 7. 13	3. 18,7	11,4
2	Sa.	3. 10. 31. 36	6. 45. 48,5	23. 2. 53	3. 30,1	11,2
3	*Su.*	3. 11. 28. 49	6. 49. 56,2	22. 58. 10	3. 41,3	11,0
4	M.	3. 12. 26. 2	6. 54. 3,8	22. 53. 2	3. 52,3	10,6
5	Tu.	3. 13. 23. 16	6. 58. 10,9	22. 47. 31	4. 2,9	10,3
6	W.	3. 14. 20. 30	7. 2. 17,8	22. 41. 36	4. 13,2	10,0
7	Th.	3. 15. 17. 44	7. 6. 24,4	22. 35. 17	4. 23,2	9,6
8	F.	3. 16. 14. 58	7. 10. 30,5	22. 28. 34	4. 32,8	9,1
9	Sa.	3. 17. 12. 13	7. 14. 36,3	22. 21. 28	4. 41,9	8,8
10	*Su.*	3. 18. 9. 28	7. 18. 41,7	22. 13. 59	4. 50,7	8,4
11	M.	3. 19. 6. 43	7. 22. 46,7	22. 6. 8	4. 59,1	7,9
12	Tu.	3. 20. 3. 58	7. 26. 51,2	21. 57. 53	5. 7,0	7,4
13	W.	3. 21. 1. 13	7. 30. 55,1	21. 49. 16	5. 14,4	6,9
14	Th.	3. 21. 58. 28	7. 34. 58,6	21. 40. 16	5. 21,3	6,5
15	F.	3. 22. 55. 44	7. 39. 1,6	21. 30. 54	5. 27,8	5,9
16	Sa.	3. 23. 52. 59	7. 43. 4,1	21. 21. 10	5. 33,7	5,4
17	*Su.*	3. 24. 50. 15	7. 47. 6,0	21. 11. 4	5. 39,1	4,8
18	M.	3. 25. 47. 31	7. 51. 7,4	21. 0. 37	5. 43,9	4,2
19	Tu.	3. 26. 44. 47	7. 55. 8,3	20. 49. 49	5. 48,1	3,7
20	W.	3. 27. 42. 3	7. 59. 8,5	20. 38. 40	5. 51,8	3,2
21	Th.	3. 28. 39. 20	8. 3. 8,2	20. 27. 10	5. 55,0	2,5
22	F.	3. 29. 36. 37	8. 7. 7,3	20. 15. 19	5. 57,5	2,0
23	Sa.	4. 0. 33. 55	8. 11. 5,9	20. 3. 8	5. 59,5	1,5
24	*Su.*	4. 1. 31. 14	8. 15. 3,9	19. 50. 37	6. 1,0	0,8
25	M.	4. 2. 28. 33	8. 19. 1,3	19. 37. 46	6. 1,8	0,2
26	Tu.	4. 3. 25. 53	8. 22. 58,1	19. 24. 35	6. 2,0	0,3
27	W.	4. 4. 23. 14	8. 26. 54,3	19. 11. 5	6. 1,7	0,9
28	Th.	4. 5. 20. 36	8. 30. 50,0	18. 57. 16	6. 0,8	1,4
29	F.	4. 6. 18. 0	8. 34. 45,1	18. 43. 8	5. 59,4	2,0
30	Sa.	4. 7. 15. 25	8. 38. 39,6	18. 28. 4	5. 57,4	2,7
31	*Su.*	4. 8. 12. 51	8. 42. 33,5	18. 13. 57	5. 54,7	3,2

Days of the Month.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 46,9	1. 8,7	2. 23,0	0. 007235	5. 16. 29
7	15. 47,0	1. 8,4	2. 23,0	0. 007208	5. 16. 9
13	15. 47,2	1. 8,0	2. 23,1	0. 007083	5. 15. 50
19	15. 47,6	1. 7,6	2. 23,2	0. 006872	5. 15. 31
25	15. 48,2	1. 7,1	2. 23,4	0. 006606	5. 15. 12

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Immersions.		II. Satellite.			III. Satellite.		
Days	H. M. S.	Days	H. M. S.		Days	H. M. S.	
1	20. 22. 45	3	4. 55. 20	I	4	5. 13. 31	I
3	14*50. 54	3	7. 13. 53	E	4	6. 56. 7	E
5	9. 19. 8	6	18. 12. 49	I	11	9. 13. 17	I
7	3. 47. 20	6	20. 31. 17	E	11	10. 54. 57	E
8	22. 15. 33	10	7. 30. 26	I	18	13*13. 22	I
10	16. 43. 48	10	9. 48. 52	E	18	14*54. 6	E
12	11. 11. 57	13	20. 48. 9	I	25	17. 13. 53	I
14	5. 40. 14	13	23. 6. 32	E	25	18. 53. 43	E
16	0. 8. 33	17	10. 6. 1	I			
17	18. 36. 51	17	12. 24. 23	E	IV. Satellite. Conjunctions.		
19	13* 5. 11	20	23. 24. 4	I			
21	7. 33. 37	21	1. 42. 22	E	1	14* 7	Sup.
23	2. 1. 55	24	12*42. 15	I	9	23. 14	Inf.
24	20. 30. 23	24	15* 0. 29	E	18	8. 19	Sup.
26	14*58. 49	28	2. 0. 36	I	26	17. 26	Inf.
28	9. 27. 21	28	4. 18. 46	E			
30	3. 55. 46	31	15*19. 7	I			
31	22. 24. 19	31	17. 37. 15	E			

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Gr. El. 21d.						
1	5. 25. 39	5. 24 N	3. 28. 11	1. 47 N	22. 17 N	1. 21
7	6. 17. 48	3. 18	4. 7. 59	1. 16	19. 31	1. 37
13	7. 7. 1	1. 5 N	4. 16. 31	0. 29 N	16. 22	1. 46
19	7. 24. 27	1. 3 S	4. 23. 39	0. 32 S	13. 9	1. 48
25	8. 11. 4	2. 59	4. 29. 9	1. 43	10. 11	1. 44
VENUS.						
1	11. 12. 4	3. 23 S	1. 26. 9	2. 37 S	16. 45 N	20. 57
7	11. 21. 36	3. 22	2. 2. 47	2. 28	18. 19	20. 59
13	0. 1. 9	3. 15	2. 9. 29	2. 17	19. 38	21. 2
19	0. 10. 42	3. 3	2. 16. 15	2. 3	20. 42	21. 6
25	0. 20. 16	2. 45	2. 23. 6	1. 47	21. 30	21. 12
MARS.						
1	1. 11. 4	0. 14 S	2. 4. 35	0. 9 S	20. 56 N	21. 27
7	1. 14. 27	0. 8	2. 8. 47	0. 5	21. 42	21. 21
13	1. 17. 48	0. 1 S	2. 12. 56	0. 1 S	22. 22	21. 14
19	1. 21. 7	0. 6 N	2. 17. 3	0. 4 N	22. 55	21. 8
25	1. 24. 24	0. 12	2. 21. 7	0. 9	23. 19	21. 1
JUPITER.						
1	0. 29. 41	1. 14 S	1. 9. 53	1. 8 S	13. 43 N	19. 46
7	1. 0. 14	1. 14	1. 10. 53	1. 9	14. 1	19. 25
13	1. 0. 47	1. 13	1. 11. 49	1. 10	14. 18	19. 4
19	1. 1. 19	1. 13	1. 12. 40	1. 10	14. 33	18. 44
25	1. 1. 52	1. 13	1. 13. 27	1. 11	14. 46	18. 23
SATURN.						
1	5. 26. 33	2. 16 N	5. 20. 43	2. 12 N	5. 42 N	4. 47
7	5. 26. 46	2. 16	5. 21. 8	2. 11	5. 32	4. 24
13	5. 26. 58	2. 17	5. 21. 36	2. 10	5. 20	4. 1
19	5. 27. 10	2. 17	5. 22. 6	2. 10	5. 8	3. 39
25	5. 27. 22	2. 17	5. 22. 39	2. 9	4. 54	3. 17

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	F.	0. 17. 52. 34	0. 24. 6. 35	2. 43. 2 S	3. 9. 55 S
2	Sa.	1. 0. 16. 40	1. 6. 23. 25	3. 34. 26	3. 56. 10
3	*Su.*	1. 12. 27. 21	1. 18. 28. 57	4. 15. 5	4. 30. 58
4	M.	1. 24. 28. 37	2. 0. 26. 49	4. 43. 47	4. 53. 24
5	Tu.	2. 6. 23. 58	2. 12. 20. 19	4. 59. 50	5. 3. 1
6	W.	2. 18. 16. 20	2. 24. 12. 12	5. 2. 53	4. 59. 27
7	Th.	3. 0. 8. 3	3. 6. 4. 15	4. 52. 47	4. 42. 58
8	F.	3. 12. 0. 55	3. 17. 58. 15	4. 30. 2	4. 14. 7
9	Sa.	3. 23. 56. 28	3. 29. 55. 45	3. 55. 20	3. 33. 54
10	*Su.*	4. 5. 56. 14	4. 11. 58. 16	3. 9. 59	2. 43. 49
11	M.	4. 18. 1. 57	4. 24. 7. 42	2. 15. 35	1. 45. 40
12	Tu.	5. 0. 15. 43	5. 6. 26. 27	1. 14. 14	0. 41. 44 S
13	W.	5. 12. 40. 9	5. 18. 57. 17	0. 8. 21 S	0. 25. 26 N
14	Th.	5. 25. 18. 17	6. 1. 43. 34	0. 59. 17 N	1. 32. 46
15	F.	6. 8. 13. 26	6. 14. 48. 28	2. 5. 30	2. 37. 0
16	Sa.	6. 21. 28. 50	6. 28. 15. 5	3. 6. 48	3. 34. 26
17	*Su.*	7. 5. 7. 15	7. 12. 5. 43	3. 59. 22	4. 21. 13
18	M.	7. 19. 10. 12	7. 26. 20. 51	4. 39. 22	4. 53. 26
19	Tu.	8. 3. 37. 15	8. 10. 58. 55	5. 2. 59	5. 7. 40
20	W.	8. 18. 25. 6	8. 25. 55. 4	5. 7. 14	5. 1. 35
21	Th.	9. 3. 27. 39	9. 11. 1. 51	4. 50. 40	4. 34. 37
22	F.	9. 18. 36. 13	9. 26. 9. 37	4. 13. 44	3. 48. 24
23	Sa.	10. 3. 40. 41	10. 11. 8. 20	3. 19. 15	2. 46. 50
24	*Su.*	10. 18. 31. 23	10. 25. 49. 6	2. 11. 52	1. 35. 8
25	M.	11. 3. 0. 42	11. 10. 5. 50	0. 57. 21 N	0. 19. 10 N
26	Tu.	11. 17. 4. 4	11. 23. 55. 23	0. 18. 42 S	0. 55. 42 S
27	W.	0. 0. 39. 53	0. 7. 17. 46	1. 31. 19	2. 5. 10
28	Th.	0. 13. 49. 18	0. 20. 14. 52	2. 36. 50	3. 6. 1
29	F.	0. 26. 35. 4	1. 2. 50. 24	3. 32. 29	3. 56. 5
30	Sa.	1. 9. 1. 16	1. 15. 8. 26	4. 16. 35	4. 33. 58
31	*Su.*	1. 21. 12. 20	1. 27. 13. 38	4. 48. 7	4. 58. 56

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	F.	24	19. 2	17. 31	23. 29	4. 31 N	6. 25 N
2	Sa.	25	19. 48	29. 26	35. 23	8. 14	9. 57
3	*Su.*	26	20. 33	41. 20	47. 18	11. 33	13. 1
4	M.	27	21. 19	53. 18	59. 20	14. 19	15. 29
5	Tu.	28	22. 5	65. 25	71. 33	16. 28	17. 17
6	W.	29	22. 52	77. 43	83. 55	17. 55	18. 21
7	Th.	30	23. 39	90. 8	96. 23	18. 35	18. 37
8	F.	1		102. 38	108. 53	18. 26	18. 4
9	Sa.	2	0. 26	115. 7	121. 20	17. 29	16. 42
10	*Su.*	3	1. 13	127. 31	133. 39	15. 44	14. 36
11	M.	4	1. 59	139. 45	145. 50	13. 17	11. 50
12	Tu.	5	2. 45	151. 54	157. 56	10. 14	8. 31
13	W.	6	3. 31	163. 58	170. 1	6. 41	4. 45
14	Th.	7	4. 18	176. 5	182. 12	2. 46 N	0. 44 N
15	F.	8	5. 5	188. 23	194. 39	1. 21 S	3. 26 S
16	Sa.	9	5. 53	201. 1	207. 31	5. 30	7. 31
17	*Su.*	10	6. 44	214. 11	221. 0	9. 29	11. 20
18	M.	11	7. 38	228. 1	235. 12	13. 3	14. 36
19	Tu.	12	8. 36	242. 36	250. 9	15. 56	17. 2
20	W.	13	9. 36	257. 52	265. 43	17. 51	18. 23
21	Th.	14	10. 38	273. 38	281. 36	18. 35	18. 27
22	F.	15	11. 38	289. 32	297. 25	17. 59	17. 12
23	Sa.	16	12. 38	305. 11	312. 49	16. 7	14. 47
24	*Su.*	17	13. 36	320. 16	327. 32	13. 12	11. 26
25	M.	18	14. 30	334. 37	341. 30	9. 31	7. 30
26	Tu.	19	15. 21	348. 13	354. 47	5. 24	3. 16 S
27	W.	20	16. 9	1. 13	7. 31	1. 8 S	0. 59 N
28	Th.	21	16. 56	13. 44	19. 52	3. 3 N	5. 3
29	F.	22	17. 42	25. 56	31. 59	6. 58	8. 46
30	Sa.	23	18. 28	38. 1	44. 2	10. 28	12. 1
31	*Su.*	24	19. 13	50. 4	56. 7	13. 27	14. 43

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	F.	15. 15	15. 9	55. 57	55. 37	5075	5100
2	Sa.	15. 4	15. 0	55. 18	55. 1	5125	5148
3	*Su.*	14. 56	14. 53	54. 47	54. 35	5166	5182
4	M.	14. 50	14. 48	54. 25	54. 17	5195	5206
5	Tu.	14. 46	14. 45	54. 11	54. 8	5214	5218
6	W.	14. 44	14. 44	54. 5	54. 4	5222	5223
7	Th.	14. 43	14. 44	54. 3	54. 5	5225	5222
8	F.	14. 45	14. 46	54. 9	54. 13	5217	5211
9	Sa.	14. 48	14. 50	54. 19	54. 26	5203	5194
10	*Su.*	14. 52	14. 55	54. 34	54. 43	5183	5171
11	M.	14. 58	15. 1	54. 54	55. 6	5157	5141
12	Tu.	15. 4	15. 8	55. 19	55. 34	5124	5104
13	W.	15. 13	15. 18	55. 50	56. 8	5084	5060
14	Th.	15. 23	15. 28	56. 27	56. 47	5036	5010
15	F.	15. 34	15. 40	57. 9	57. 31	4983	4955
16	Sa.	15. 46	15. 53	57. 55	58. 18	4924	4896
17	*Su.*	16. 0	16. 7	58. 43	59. 7	4865	4835
18	M.	16. 13	16. 19	59. 31	59. 53	4806	4779
19	Tu.	16. 24	16. 29	60. 14	60. 32	4754	4733
20	W.	16. 34	16. 37	60. 48	61. 0	4714	4699
21	Th.	16. 40	16. 41	61. 9	61. 13	4689	4684
22	F.	16. 41	16. 39	61. 13	61. 7	4684	4691
23	Sa.	16. 37	16. 33	60. 58	60. 44	4702	4718
24	*Su.*	16. 28	16. 22	60. 26	60. 5	4740	4765
25	M.	16. 16	16. 9	59. 42	59. 15	4793	4826
26	Tu.	16. 1	15. 53	58. 47	58. 19	4850	4895
27	W.	15. 46	15. 38	57. 51	57. 22	4930	4966
28	Th.	15. 30	15. 24	56. 55	56. 29	5000	5033
29	F.	15. 17	15. 11	56. 5	55. 43	5064	5093
30	Sa.	15. 5	15. 1	55. 23	55. 5	5119	5142
31	*Su.*	14. 57	14. 53	54. 50	54. 38	5162	5178

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		81. 42. 23	80. 15. 48	78. 49. 30	77. 23. 28
2		70. 17. 20	68. 52. 50	67. 28. 33	66. 4. 29
3	The Sun.	59. 7. 8	57. 44. 12	56. 21. 26	54. 58. 49
4		48. 7. 58	46. 46. 11	45. 24. 30	44. 2. 56
5					
10		74. 40. 33	73. 10. 27	71. 40. 16	70. 9. 59
11		62. 36. 53	61. 5. 53	59. 34. 43	58. 3. 26
12	Spica ♍	50. 25. 4	48. 52. 57	47. 20. 40	45. 48. 14
13		38. 3. 55	36. 30. 36	34. 57. 8	33. 23. 32
14		25. 34. 0	23. 59. 59	22. 25. 59	20. 52. 2
15		58. 43. 21	57. 6. 45	55. 29. 56	53. 52. 54
16	Antares.	45. 44. 43	44. 6. 30	42. 28. 6	40. 49. 35
17		32. 36. 14	30. 57. 47	29. 19. 29	27. 41. 28
18	α Aquilæ.	69. 48. 33	68. 13. 49	66. 39. 4	65. 4. 21
19		57. 12. 27	55. 38. 49	54. 5. 34	52. 32. 46
20	ρ Capri-	42. 19. 39	40. 27. 57	38. 36. 3	36. 43. 56
21	corni.	27. 20. 54	25. 27. 55	23. 34. 50	21. 41. 41
22		61. 58. 51	60. 14. 25	58. 30. 22	56. 46. 46
23	α Pegaſi.	48. 17. 28	46. 37. 48	44. 59. 5	43. 21. 30
24		35. 33. 34			
24		75. 49. 15	74. 2. 28	72. 16. 4	70. 30. 5
25	α Arietis.	61. 46. 57	60. 3. 47	58. 21. 11	56. 39. 8
26		48. 18. 9	46. 39. 58	45. 2. 31	43. 25. 52
27		35. 35. 42			
27		65. 56. 17	64. 15. 51	62. 35. 51	60. 56. 17
28	Aldeba-	52. 44. 40	51. 7. 34	49. 30. 50	47. 54. 29
29	ran.	39. 58. 1	38. 23. 43	36. 49. 44	35. 16. 4
30		27. 32. 18			
27				120. 36. 54	119. 4. 43
28		111. 29. 53	110. 0. 7	108. 30. 44	107. 1. 43
29	The Sun.	99. 41. 49	98. 14. 50	96. 48. 9	95. 21. 47
30		88. 14. 26	86. 49. 45	85. 25. 18	84. 1. 5
31		77. 3. 18	75. 40. 19	74. 17. 30	72. 54. 49
A. 1		66. 3. 39			

Distances of ☽'s Center from ☉, and from Stars east of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	75. 57. 44	74. 32. 16	73. 7. 2	71. 42. 4
2		64. 40. 37	63. 16. 58	61. 53. 30	60. 30. 14
3		53. 36. 22	52. 14. 4	50. 51. 54	49. 29. 52
4		42. 41. 29	41. 20. 8	39. 58. 52	
10	Spica ♍	68. 39. 36	67. 9. 5	65. 38. 28	64. 7. 44
11		56. 32. 1	55. 0. 29	53. 28. 50	51. 57. 1
12		44. 15. 40	42. 42. 57	41. 10. 5	39. 37. 4
13		31. 49. 50	30. 15. 59	28. 42. 2	27. 8. 2
14		19. 18. 7			
14	Antares.	65. 7. 18	63. 31. 42	61. 55. 50	60. 19. 43
15		52. 15. 39	50. 38. 12	49. 0. 34	47. 22. 44
16		39. 10. 58	37. 32. 15	35. 53. 30	34. 14. 50
17		26. 3. 45			
17	α Aquilæ.	76. 6. 24	74. 32. 11	72. 57. 46	71. 23. 13
18		63. 29. 42	61. 55. 5	60. 20. 39	58. 46. 25
19		51. 0. 28			
19	β Capricorni.	49. 43. 53	47. 53. 14	46. 2. 19	44. 11. 7
20		34. 51. 38	32. 59. 10	31. 6. 32	29. 13. 46
21		19. 48. 29			
21	α Pegasi.	68. 59. 19	67. 13. 54	65. 28. 39	63. 43. 37
22		55. 3. 40	53. 21. 6	51. 39. 9	49. 57. 58
23		41. 45. 3	40. 9. 56	38. 36. 15	37. 4. 5
24	α Arietis.	68. 44. 32	66. 59. 25	65. 14. 47	63. 30. 37
25		54. 57. 40	53. 16. 48	51. 36. 35	49. 57. 2
26		41. 50. 2	40. 15. 4	38. 41. 0	37. 7. 52
27	Aldebaran.	59. 17. 8	57. 38. 24	56. 0. 5	54. 22. 10
28		46. 18. 30	44. 42. 52	43. 7. 35	41. 32. 38
29		33. 42. 43	32. 9. 40	30. 36. 55	29. 4. 28
27	The Sun.	117. 32. 57	116. 1. 35	114. 30. 37	113. 0. 3
28		105. 33. 3	104. 4. 44	102. 36. 46	101. 9. 7
29		93. 55. 43	92. 29. 58	91. 4. 32	89. 39. 22
30		82. 37. 6	81. 13. 21	79. 49. 48	78. 26. 27
31		71. 32. 18	70. 9. 54	68. 47. 39	67. 25. 34

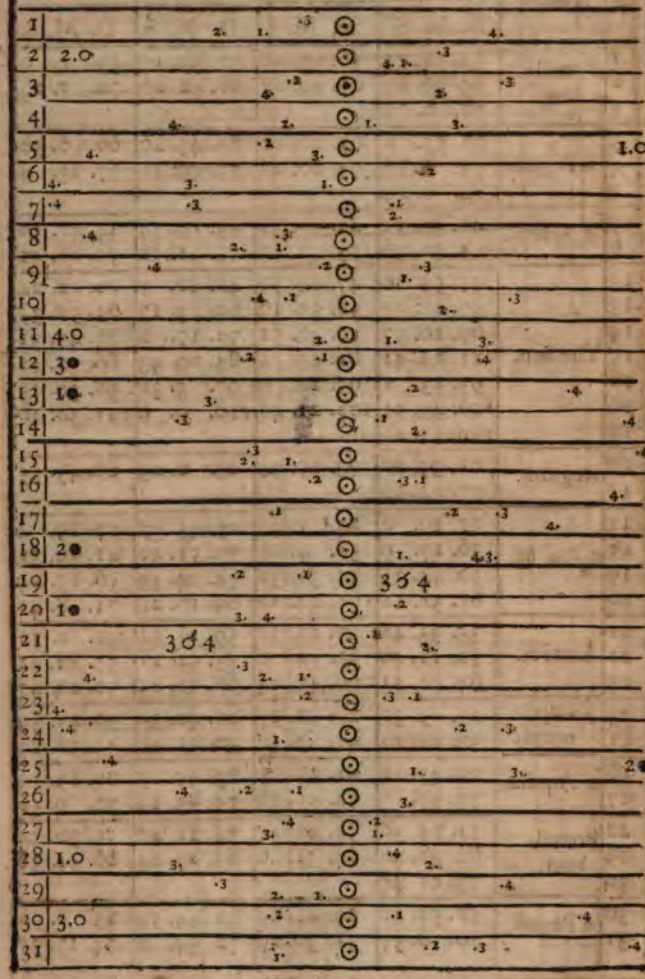
Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Fomal-haut.	49. 25. 57	50. 47. 43	52. 9. 43	53. 31. 51
2		60. 24. 48	61. 47. 40	63. 10. 34	64. 33. 31
3		71. 28. 22	72. 51. 19	74. 14. 15	75. 37. 9
4	α Pegaſi.	67. 29. 51	68. 53. 6	70. 16. 22	71. 39. 40
5		78. 36. 27	79. 59. 50	81. 23. 13	82. 46. 36
6	ϰ Arietis.	46. 6. 21	47. 30. 6	48. 54. 4	50. 18. 14
7		57. 21. 38			
12	The Sun.	40. 12. 42	41. 37. 44	43. 2. 59	44. 28. 26
13		51. 38. 57	53. 5. 44	54. 32. 45	56. 0. 1
14		63. 20. 5	64. 48. 53	66. 17. 58	67. 47. 19
15		75. 18. 19	76. 49. 26	78. 20. 52	79. 52. 37
16		87. 36. 5	89. 9. 48	90. 43. 52	92. 18. 16
17		100. 15. 29	101. 52. 2	103. 28. 57	105. 6. 13
18		113. 17. 47	114. 57. 10	116. 36. 54	118. 17. 0
16	Regulus.	54. 49. 10	56. 30. 12	58. 11. 35	59. 53. 17
17		68. 27. 3	70. 10. 53	71. 55. 6	73. 39. 41
18	Spica ♍	29. 13. 37	30. 58. 43	32. 44. 22	34. 30. 31
19		43. 27. 49	45. 16. 27	47. 5. 28	48. 54. 50
20		58. 6. 16	59. 57. 24	61. 48. 47	63. 40. 24
21		73. 1. 10			
21	Antares.	28. 24. 21	30. 10. 46	31. 57. 51	33. 45. 33
22		42. 50. 59	44. 40. 57	46. 31. 4	48. 21. 20
23		57. 32. 57	59. 23. 8	61. 13. 11	63. 3. 6
24		72. 9. 34			
24	β Capri-corni.	17. 45. 6	19. 35. 12	21. 24. 58	23. 14. 24
25		32. 16. 17	34. 3. 33	35. 50. 24	37. 36. 51
26		46. 22. 39			
26	ϰ Aquilæ.	54. 52. 7	56. 20. 42	57. 49. 24	59. 18. 13
27		66. 42. 52	68. 11. 38	69. 40. 16	71. 8. 46
28		78. 28. 23			
28	Fomal-haut.	45. 51. 4	47. 14. 2	48. 37. 18	50. 0. 50
29		57. 1. 15	58. 25. 37	59. 50. 0	61. 14. 25
30		68. 15. 46	69. 39. 52	71. 3. 54	72. 27. 52
31	α Pegaſi.	64. 32. 18	65. 55. 58	67. 19. 36	68. 43. 15
A. 1		75. 41. 7			

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Fomal-haut.	54. 54. 11	56. 16. 40	57. 39. 17	59. 2. 0
2		65. 56. 29	67. 19. 27	68. 42. 26	70. 5. 24
3		77. 0. 1			
3	α Pegaſi.	61. 57. 8	63. 20. 16	64. 43. 26	66. 6. 38
4		73. 2. 59	74. 26. 20	75. 49. 41	77. 13. 4
5		84. 9. 59			
5	α Arietis.	40. 33. 51	41. 56. 34	43. 19. 34	44. 42. 50
6		51. 42. 36	53. 7. 8	54. 31. 50	55. 56. 40
12	The Sun.	45. 54. 6	47. 19. 59	48. 46. 5	50. 12. 24
13		57. 27. 31	58. 55. 16	60. 23. 17	61. 51. 33
14		69. 16. 57	70. 46. 51	72. 17. 2	73. 47. 31
15		81. 24. 41	82. 57. 2	84. 29. 43	86. 2. 44
16		93. 53. 1	95. 28. 6	97. 3. 32	98. 39. 19
17		106. 43. 51	108. 21. 48	110. 0. 6	111. 38. 46
18		119. 57. 27			
16	Regulus.	61. 35. 20	63. 17. 44	65. 0. 29	66. 43. 35
17		75. 24. 39			
17	Spica ♍	22. 19. 6	24. 1. 47	25. 45. 7	27. 29. 4
18		36. 17. 9	38. 4. 12	39. 51. 40	41. 39. 33
19		50. 44. 31	52. 34. 31	54. 24. 49	56. 15. 24
20		65. 32. 12	67. 24. 12	69. 16. 22	71. 8. 41
21	Antares.	35. 33. 48	37. 22. 32	39. 11. 41	41. 1. 12
22		50. 11. 40	52. 2. 0	53. 52. 21	55. 42. 41
23		64. 52. 51	66. 42. 24	68. 31. 43	70. 20. 47
24	β Capri-corni.	25. 3. 30	26. 52. 15	28. 40. 38	30. 28. 39
25		39. 22. 53	41. 8. 30	42. 53. 40	44. 38. 23
26	α Aquilæ.	60. 47. 8	62. 16. 5	63. 45. 3	65. 13. 59
27		72. 37. 7	74. 5. 16	75. 33. 13	77. 0. 56
28	Fomal-haut.	51. 24. 36	52. 48. 34	54. 12. 40	55. 36. 54
29		62. 38. 48	64. 3. 6	65. 27. 23	66. 51. 36
30		73. 51 45			
30	α Pegaſi.	58. 57. 42	60. 21. 20	61. 44. 59	63. 8. 36
31		70. 6. 55	71. 30. 29	72. 54. 2	74. 17. 35

Configurations of the SATELLITES of JUPITER at 2 o' th' Clock in the Morning.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	M.	Lammas-day.
2	Tu.	
3	W.	
4	Th.	
5	F.	
6	Sa.	Transfig. of our Lord.
7	*Su.*	*10th Sunday after Trinity.*
8	M.	[Name of Jesus.
9	Tu.	
10	W.	S. Lawrence.
11	Th.	*Prs. of Brunswick born.*
12	F.	*Pr. of Wales born* 1762.
13	Sa.	
14	*Su.*	*11th Sunday after Trinity.*
15	M.	
16	Tu.	*Pr. Frederick born.*
17	W.	
18	Th.	
19	F.	
20	Sa.	
21	*Su.*	*12th Su. after Tr. Pr. W.*
22	M.	[*Hen. born.*
23	Tu.	
24	W.	*St. Bartholomew.*
25	Th.	
26	F.	
27	Sa.	
28	*Su.*	*13th Su. after Tr.* S. Aug.
29	M.	Beheading of St. John
30	Tu.	[Bapt.
31	W.	

Phases of the Moon.

	D. H. M.
New Moon —	6. 23. 56
First Quarter —	14. 11. 35
Full Moon —	21. 2. 51
Last Quarter —	28. 12. 26

Other Phenomena.

D.

1. ☿ ☍ ☊ diff. Lat. 32′.
   ☾ 1 ad ☌ ☉ 0h. 59′.
   ☾ 2 ad ☌ ☉ 1h. 30′.
   ☾ ☌ ☉ 6h. 53′.
4. ☿ Stationary.
9. ☾ ☐ ♑ 16h. 26′.
10. ☾ ☍ ♍ 2h. 58′.
    ☾ ☌ ♍ 17h. 23′.
11. ☾ ☌ ♍ 18h. 3′.
12. ☾ ☌ ♍ 23h. 18′.
13. ☿ ☌ ☊ diff. Lat. 34′.
14. ☾ ☐ ♎ 11h. 22′.
    ☾ ☍ ♎ 15h. 12′.
    ☾ ☌ ♎ 20h. 22′.
15. ☾ ☌ Serpentar. 10h. 9′.
19. ☾ ☍ ♈ 5h. 31′.
21. ☾ ☌ ♒ 7h. 29′.
22. ☾ ☌ ♒ 4h. 56′.
    ☉ enters ♍ at 16h. 6′.
24. ☿ ☌ ♑ diff. Lat. 56′.
27. ☿ Stationary.
28. ☾ ☐ ☉ 6h. 28′.
    ☾ 1 ad ☌ ☉ 8h. 35′.
    ☾ 2 ad ☌ ☉ 9h. 6′.
    ☾ ☌ ☉ 14h. 25′.
30. ☿ ☌ ♋ diff. Lat. 6′.
31. ♂ ☌ ☊ diff. Lat. 49′.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. North.	Equat. of Time. Add.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	M.	4. 9. 10. 17	8.46.26,8	17. 58. 54	5. 51,5	3,8
2	Tu.	4. 10. 7. 45	8.50.19,5	17. 43. 34	5. 47,7	4,4
3	W.	4. 11. 5. 15	8.54.11,8	17. 27. 56	5. 43,3	4,9
4	Th.	4. 12. 2. 46	8.58. 3,3	17. 12. 0	5. 38,4	5,5
5	F.	4. 13. 0. 19	9. 1.54,4	16. 55. 48	5. 32,9	6,1
6	Sa.	4. 13. 57. 52	9. 5.44,8	16. 39. 20	5. 26,8	6,7
7	*Su.*	4. 14. 55. 27	9. 9.34,6	16. 22. 35	5. 20,1	7,3
8	M.	4. 15. 53. 3	9.13.23,9	16. 5. 35	5. 12,8	7,9
9	Tu.	4. 16. 50. 39	9.17.12,5	15. 48. 19	5. 4,9	8,5
10	W.	4. 17. 48. 17	9.21. 0,6	15. 30. 47	4. 56,4	9,0
11	Th.	4. 18. 45. 56	9.24.48,1	15. 13. 1	4. 47,4	9,6
12	F.	4. 19. 43. 36	9.28.35,0	14. 55. 0	4. 37,8	10,2
13	Sa.	4. 20. 41. 17	9.32.21,3	14. 36. 45	4. 27,6	10,8
14	*Su.*	4. 21. 38. 58	9.36. 7,1	14. 18. 17	4. 16,8	11,3
15	M.	4. 22. 36. 41	9.39.52,3	13. 59. 35	4. 5,5	11,8
16	Tu.	4. 23. 34. 24	9.43.37,0	13. 40. 38	3. 53,7	12,4
17	W.	4. 24. 32. 9	9.47.21,1	13. 21. 29	3. 41,3	13,0
18	Th.	4. 25. 29. 55	9.51. 4,7	13. 2. 8	3. 28,3	13,4
19	F.	4. 26. 27. 42	9.54.47,8	12. 42. 34	3. 14,9	13,9
20	Sa.	4. 27. 25. 30	9.58.30,4	12. 22. 48	3. 1,0	14,4
21	*Su.*	4. 28. 23. 19	10. 2.12,5	12. 2. 51	2. 46,6	14,9
22	M.	4. 29. 21. 10	10. 5.54,1	11. 42. 42	2. 31,7	15,3
23	Tu.	5. 0. 19. 3	10. 9.35,3	11. 22. 22	2. 16,4	15,7
24	W.	5. 1. 16. 57	10.13.16,1	11. 1. 50	2. 0,7	16,1
25	Th.	5. 2. 14. 53	10.16.56,5	10. 41. 9	1. 44,6	16,6
26	F.	5. 3. 12. 50	10.20.36,5	10. 20. 17	1. 28,0	16,9
27	Sa.	5. 4. 10. 50	10.24.16,1	9. 59. 15	1. 11,1	17,2
28	*Su.*	5. 5. 8. 51	10.27.55,4	9. 38. 3	0. 53,9	17,5
29	M.	5. 6. 6. 55	10.31.34,3	9. 16. 42	0. 36,4	17,9
30	Tu.	5. 7. 5. 0	10.35.12,9	8. 55. 13	0. 18,5	18,2
31	W.	5. 8. 3. 8	10.38.51,3	8. 33. 34	0. 0,3	

Days.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 49,0	1. 6,5	2. 23,6	0. 006238	5. 14. 50
7	15. 49,9	1. 6,0	2. 23,9	0. 005846	5. 14. 31
13	15. 51,0	1. 5,5	2. 24,3	0. 005368	5. 14. 12
19	15. 52,2	1. 5,1	2. 24,6	0. 004828	5. 13. 53
25	15. 53,3	1. 4,7	2. 25,0	0. 004256	5. 13. 34

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Immerſions.		II. Satellite.		III. Satellite.	
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.
2	16. 52. 55	4	4. 37. 48 I	1	21. 14. 51 I
4	11. 21. 28	4	6. 55. 52 E	1	22. 53. 53 E
6	5. 50. 5	7	17. 56. 40 I	9	1. 16. 14 I
8	0. 18. 45	7	20. 14. 41 E	9	2. 54. 27 E
9	18. 47. 23	11	7. 15. 37 I	16	5. 18. 4 I
11	13*16. 6	11	9. 33. 35 E	16	6. 55. 31 E
13	7. 44. 51	14	20. 34. 39 I	23	9. 20. 24 I
15	2. 13. 34	14	22. 52. 35 E	23	10*57. 4 E
16	20. 42. 23	18	9. 53. 54 I	30	13*22. 57 I
18	15*11. 12	21	23. 13. 19 I	30	14*59. 2 E
20	9. 40. 0	25	12*32. 39 I		
22	4. 8. 53	29	1. 52. 14 I	IV. Satellite. Conj.	
23	22. 37. 48				
25	17. 6. 40			4	2. 33. 3 Sup.
27	11*35. 37			12	11*40. 37 Inf.
29	6. 4. 34			20	20. 48. 58 Sup.
31	0. 33. 33			29	5. 58. 3 Inf.

Days	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Inf. ☌ 18d. 4h.						
1	9. 0. 25	4. 55 S	5. 2. 53	3. 10 S	7. 30 N	1. 28
7	9. 17. 51	6. 11	5. 3. 2	4. 14	6. 27	1. 4
13	10. 6. 58	6. 54	5. 0. 3	4. 44	7. 2	0. 29
19	10. 28. 48	6. 49	4. 25. 0	4. 16	9. 11	23. 43
25	11. 24. 39	5. 27	4. 21. 0	2. 48	11. 51	23. 8
VENUS.						
1	1. 1. 28	2. 19 S	3. 1. 10	1. 26 S	22. 1 N	21. 20
7	1. 11. 4	1. 52	3. 8. 10	1. 7	22. 6	21. 27
13	1. 20. 42	1. 23	3. 15. 12	0. 48	21. 48	21. 34
19	2. 0. 20	0. 50	3. 22. 17	0. 28	21. 10	21. 42
25	2. 9. 59	0. 16	3. 29. 25	0. 9	20. 9	21. 51
MARS.						
1	1. 28. 11	0. 19 N	2. 25. 49	0. 14 N	23. 38 N	20. 55
7	2. 1. 23	0. 25	2. 29. 48	0. 19	23. 47	20. 49
13	2. 4. 34	0. 31	3. 3. 45	0. 23	23. 48	20. 43
19	2. 7. 42	0. 37	3. 7. 39	0. 28	23. 43	20. 38
25	2. 10. 49	0. 43	3. 11. 30	0. 32	23. 30	20. 32
JUPITER. □ 6d. 21h.						
1	1. 2. 31	1. 12 S	1. 14. 15	1. 12 S	14. 59 N	18. 0
7	1. 3. 3	1. 12	1. 14. 50	1. 14	15. 8	17. 39
13	1. 3. 36	1. 12	1. 15. 19	1. 15	15. 15	17. 18
19	1. 4. 9	1. 11	1. 15. 41	1. 16	15. 20	16. 57
25	1. 4. 42	1. 11	1. 15. 57	1. 17	15. 24	16. 36
SATURN.						
1	5. 27. 36	2. 17 N	5. 23. 20	2. 8 N	4. 36 N	2. 52
7	5. 27. 49	2. 18	5. 23. 57	2. 7	4. 21	2. 31
13	5. 28. 1	2. 18	5. 24. 36	2. 7	4. 5	2. 11
19	5. 28. 13	2. 18	5. 25. 16	2. 6	3. 49	1. 51
25	5. 28. 25	2. 18	5. 25. 58	2. 6	3. 32	1. 31

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	M.	2. 3. 12. 43	2. 9. 10. 19	5. 6. 27 S	5. 10. 35 S
2	Tu.	2. 15. 6. 45	2. 21. 2. 40	5. 11. 23	5. 8. 50
3	W.	2. 26. 58. 22	3. 2. 54. 17	5. 3. 0	4. 53. 53
4	Th.	3. 8. 50. 48	3. 14. 48. 11	4. 41. 36	4. 26. 10
5	F.	3. 20. 46. 41	3. 26. 46. 43	4. 7. 50	3. 46. 39
6	Sa.	4. 2. 48. 20	4. 8. 51. 45	3. 22. 52	2. 56. 38
7	*Su.*	4. 14. 57. 19	4. 21. 5. 3	2. 28. 12	1. 57. 54
8	M.	4. 27. 15. 6	5. 3. 27. 45	1. 25. 57	0. 52. 47 S
9	Tu.	5. 9. 43. 4	5. 16. 1. 14	0. 18. 40 S	0. 15. 57 N
10	W.	5. 22. 22. 29	5. 28. 46. 58	0. 50. 40 N	1. 25. 5
11	Th.	6. 5. 14. 51	6. 11. 46. 23	1. 58. 46	2. 31. 7
12	F.	6. 18. 21. 45	6. 25. 1. 6	3. 1. 54	3. 30. 30
13	Sa.	7. 1. 44. 39	7. 8. 32. 25	3. 56. 31	4. 19. 31
14	*Su.*	7. 15. 24. 38	7. 22. 21. 13	4. 39. 3	4. 54. 45
15	M.	7. 29. 22. 13	8. 6. 27. 25	5. 6. 12	5. 13. 8
16	Tu.	8. 13. 36. 38	8. 20. 49. 38	5. 15. 17	5. 12. 32
17	W.	8. 28. 5. 47	9. 5. 24. 44	5. 4. 45	4. 52. 0
18	Th.	9. 12. 45. 41	9. 20. 7. 57	4. 34. 22	4. 12. 10
19	F.	9. 27. 30. 38	10. 4. 52. 54	3. 45. 44	3. 15. 33
20	Sa.	10. 12. 13. 47	10. 19. 32. 24	2. 42. 13	2. 6. 20
21	*Su.*	10. 26. 47. 55	11. 3. 59. 34	1. 28. 38	0. 49. 53 N
22	M.	11. 11. 6. 36	11. 18. 8. 30	0. 10. 39 N	0. 28. 13 S
23	Tu.	11. 25. 4. 59	0. 1. 55. 34	1. 6. 14 S	1. 42. 44
24	W.	0. 8. 40. 15	0. 15. 19. 1	2. 17. 16	2. 49. 28
25	Th.	0. 21. 51. 51	0. 28. 19. 8	3. 18. 54	3. 45. 22
26	F.	1. 4. 41. 3	1. 10. 58. 2	4. 8. 42	4. 28. 42
27	Sa.	1. 17. 10. 28	1. 23. 19. 0	4. 45. 16	4. 58. 25
28	*Su.*	1. 29. 23. 56	2. 5. 25. 58	5. 8. 3	5. 14. 15
29	M.	2. 11. 25. 36	2. 17. 23. 29	5. 16. 51	5. 16. 5
30	Tu.	2. 23. 20. 11	2. 29. 16. 13	5. 11. 57	5. 4. 28
31	W.	3. 5. 12. 5	3. 11. 8. 26	4. 53. 46	4. 39. 52

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	M.	25	20. 0	62. 11	68. 18	15. 48 N	16. 44 N
2	Tu.	26	20. 47	74. 26	80. 37	17. 29	18. 2
3	W.	27	21. 34	86. 49	93. 3	18. 23	18. 32
4	Th.	28	22. 22	99. 18	105. 33	18. 29	18. 14
5	F.	29	23. 10	111. 49	118. 4	17. 46	17. 7
6	Sa.	1	23. 57	124. 17	130. 30	16. 16	15. 13
7	*Su.*	2	♂	136. 41	142. 50	14. 0	12. 38
8	M.	3	0. 44	148. 58	155. 4	11. 6	9. 26
9	Tu.	4	1. 30	161. 9	167. 14	7. 39	5. 46
10	W.	5	2. 17	173. 20	179. 27	3. 48 N	1. 47 N
11	Th.	6	3. 3	185. 36	191. 49	0. 16 S	2. 20 S
12	F.	7	3. 51	198. 6	204. 28	4. 24	6. 26
13	Sa.	8	4. 41	210. 57	217. 34	8. 24	10. 16
14	*Su.*	9	5. 33	224. 19	231. 14	12. 1	13. 38
15	M.	10	6. 28	238. 18	245. 31	15. 3	16. 16
16	Tu.	11	7. 25	252. 53	260. 24	17. 15	17. 57
17	W.	12	8. 25	268. 0	275. 41	18. 22	18. 30
18	Th.	13	9. 25	283. 25	291. 8	18. 18	17. 48
19	F.	14	10. 25	298. 49	306. 25	16. 59	15. 54
20	Sa.	15	11. 23	313. 55	321. 17	14. 33	12. 59
21	*Su.*	16	12. 19	328. 31	335. 35	11. 12	9. 17
22	M.	17	13. 12	342. 30	349. 17	7. 15	5. 8
23	Tu.	18	14. 2	355. 56	2. 27	2. 58 S	0. 48 S
24	W.	19	14. 51	8. 52	15. 12	1. 20 N	3. 25 N
25	Th.	20	15. 39	21. 27	27. 39	5. 27	7. 23
26	F.	21	16. 26	33. 49	39. 57	9. 11	10. 52
27	Sa.	22	17. 13	46. 5	52. 12	12. 25	13. 48
28	*Su.*	23	18. 0	58. 20	64. 28	15. 2	16. 5
29	M.	24	18. 47	70. 38	76. 49	16. 57	17. 37
30	Tu.	25	19. 34	83. 1	89. 14	18. 6	18. 23
31	W.	26	20. 22	95. 28	101. 42	18. 28	18. 21

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Log. at Noon.	Proport. Log. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	M.	14. 51	14. 48	54. 28	54. 20	5191	5202
2	Tu.	14. 47	14. 46	54. 15	54. 12	5209	5213
3	W.	14. 46	14. 46	54. 10	54. 11	5215	5214
4	Th.	14. 47	14. 48	54. 14	54. 18	5210	5205
5	F.	14. 49	14. 51	54. 24	54. 32	5197	5186
6	Sa.	14. 54	14. 56	54. 40	54. 50	5175	5162
7	*Su.*	14. 59	15. 2	55. 0	55. 12	5149	5133
8	M.	15. 6	15. 9	55. 24	55. 37	5118	5100
9	Tu.	15. 13	15. 19	55. 51	56. 5	5082	5064
10	W.	15. 21	15. 25	56. 20	56. 36	5045	5025
11	Th.	15. 30	15. 34	56. 52	57. 9	5004	4983
12	F.	15. 39	15. 43	57. 25	57. 42	4962	4941
13	Sa.	15. 48	15. 53	58. 0	58. 18	4918	4896
14	*Su.*	15. 58	16. 3	58. 36	58. 54	4874	4852
15	M.	16. 8	16. 12	59. 11	59. 27	4831	4811
16	Tu.	16. 16	16. 20	59. 42	59. 57	4793	4775
17	W.	16. 23	16. 26	60. 9	60. 19	4760	4748
18	Th.	16. 28	16. 29	60. 26	60. 30	4740	4735
19	F.	16. 29	16. 29	60. 31	60. 28	4734	4737
20	Sa.	16. 27	16. 24	60. 22	60. 12	4745	4757
21	*Su.*	16. 21	16. 16	59. 59	59. 43	4772	4792
22	M.	16. 11	16. 5	59. 23	59. 2	4816	4842
23	Tu.	15. 59	15. 52	58. 38	58. 14	4871	4901
24	W.	15. 45	15. 38	57. 48	57. 22	4933	4966
25	Th.	15. 31	15. 24	56. 57	56. 33	4998	5028
26	F.	15. 18	15. 12	56. 10	55. 48	5058	5086
27	Sa.	15. 7	15. 2	55. 29	55. 11	5111	5134
28	*Su.*	14. 58	14. 55	54. 57	54. 44	5153	5170
29	M.	14. 52	14. 50	54. 34	54. 27	5183	5193
30	Tu.	14. 49	14. 48	54. 23	54. 19	5198	5203
31	W.	14. 48	14. 49	54. 20	54. 23	5202	5198

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	66. 3. 39	64. 41. 46	63. 19. 58	61. 58. 16
2		55. 10. 51	53. 49. 30	52. 28. 11	51. 6. 54
3		44. 20. 37	42. 59. 21	41. 38. 3	40. 16. 43
9	Spica ♍	41. 0. 9	39. 26. 26	37. 52. 37	36. 18. 40
10		28. 27. 41	26. 53. 21	25. 19. 3	23. 44. 49
11		15. 57. 26			
11	Antares.	61. 39. 53	60. 3. 56	58. 27. 49	56. 51. 34
12		48. 48. 22	47. 11. 24	45. 34. 21	43. 57. 14
13		35. 51. 30	34. 14. 32	32. 37. 45	31. 1. 13
14	α Aquilæ.	73. 4. 37	71. 32. 20	70. 0. 4	68. 27. 49
15		60. 47. 46	59. 16. 16	57. 45. 2	56. 14. 8
16		48. 46. 43			
16	β Capricorni.	47. 6. 42	45. 19. 15	43. 31. 35	41. 43. 44
17		32. 41. 25	30. 52. 22	29. 3. 10	27. 13. 48
18		18. 5. 2			
18	α Pegaſi.	67. 21. 44	65. 39. 27	63. 57. 16	62. 15. 16
19		53. 49. 26	52. 9. 26	50. 29. 58	48. 51. 6
20		40. 48. 52	39. 15. 34	37. 43. 40	36. 13. 19
21	α Arietis.	67. 47. 59	66. 3. 8	64. 18. 38	62. 34. 30
22		54. 0. 13	52. 18. 48	50. 37. 58	48. 57. 44
23		40. 46. 26			
23	Aldebaran.	71. 32. 9	69. 48. 33	68. 5. 21	66. 22. 31
24		57. 54. 11	56. 13. 41	54. 33. 34	52. 53. 51
25		44. 41. 9	43. 3. 45	41. 26. 42	39. 50. 2
26		31. 52. 0	30. 17. 25	28. 43. 9	27. 9. 12
27		19. 24. 0			
27	Pollux.	63. 50. 43	62. 20. 33	60. 50. 42	59. 21. 11
28		51. 58. 9	50. 30. 25	49. 2. 58	47. 35. 50
26	The Sun.	118. 26. 54	116. 59. 33	115. 32. 31	114. 5. 48
27		106. 56. 45	105. 31. 45	104. 7. 0	102. 42. 30
28		95. 43. 32	94. 20. 21	92. 57. 21	91. 34. 31
29		84. 42. 40	83. 20. 40	81. 58. 46	80. 36. 57
30		73. 48. 56	72. 27. 28	71. 6. 2	69. 44. 36
31		62. 57. 29	61. 35. 58	60. 14. 23	58. 52. 45
S. 1		52. 3. 25			

Distances of ☽'s Center from ☉, and from Stars east of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	60. 36. 39	59. 15. 7	57. 53. 38	56. 32. 13
2		49. 45. 38	48. 24. 23	47. 3. 7	45. 41. 52
3		38. 55. 22			
8	Spica ♍	47. 13. 45	45. 40. 33	44. 7. 12	42. 33. 44
9		34. 44. 37	33. 10. 29	31. 36. 17	30. 2. 0
10		22. 10. 43	20. 36. 48	19. 3. 12	17. 30. 2
11	Antares.	55. 15. 10	53. 38. 38	52. 1. 59	50. 25. 13
12		42. 20. 5	40. 42. 54	39. 5. 43	37. 28. 34
13		29. 24. 59			
13	α Aquilæ.	79. 13. 4	77. 41. 6	76. 9. 0	74. 36. 51
14		66. 55. 36	65. 23. 27	63. 51. 24	62. 19. 29
15		54. 43. 37	53. 13. 32	51. 43. 59	50. 15. 1
16	β Capricorni.	39. 55. 39	38. 7. 23	36. 18. 55	34. 30. 15
17		25. 24. 17	23. 34. 38	21. 44. 52	19. 55. 0
18	α Pegasi.	60. 33. 28	58. 51. 57	57. 10. 45	55. 29. 53
19		47. 12. 55	45. 35. 29	43. 58. 56	42. 23. 21
20		34. 44. 41			
20	α Arietis.	74. 50. 17	73. 4. 19	71. 18. 36	69. 33. 9
21		60. 50. 45	59. 7. 25	57. 24. 32	55. 42. 8
22		47. 18. 5	45. 39. 6	44. 0. 49	42. 23. 15
23	Aldebaran.	64. 40. 5	62. 58. 1	61. 16. 21	59. 35. 4
24		51. 14. 31	49. 35. 36	47. 57. 4	46. 18. 55
25		38. 13. 43	36. 37. 46	35. 2. 10	33. 26. 55
26		25. 35. 34	24. 2. 14	22. 29. 12	20. 56. 27
27	Pollux.	57. 51. 58	56. 23. 4	54. 54. 28	53. 26. 10
28		46. 9. 1			
25	The Sun.			121. 22. 36	119. 54. 35
26		112. 39. 24	111. 13. 19	109. 47. 31	108. 22. 0
27		101. 18. 14	99. 54. 14	98. 30. 27	97. 6. 53
28		90. 11. 52	88. 49. 22	87. 27. 0	86. 4. 46
29		79. 15. 14	77. 53. 34	76. 31. 58	75. 10. 26
30		68. 23. 12	67. 1. 48	65. 40. 23	64. 18. 57
31		57. 31. 3	56. 9. 16	54. 47. 25	53. 25. 28

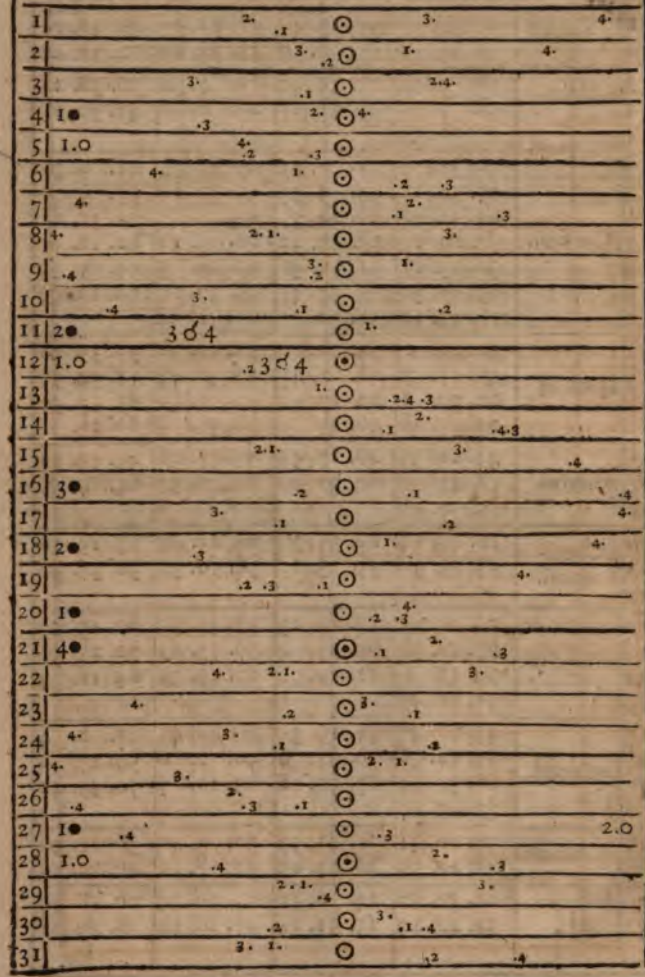
Diſtances of ☽'s Center from Stars, and from ☉ weſt of her.

Days	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		32. 19. 4	33. 39. 4	34. 59. 34	36. 20. 32
2	ϒ Arietis.	43. 11. 19	44. 34. 24	45. 57. 44	47. 21. 19
3		54. 22. 10			
3		20. 15. 14	21. 43. 50	23. 12. 28	24. 41. 9
4	Aldebaran.	32. 5. 21	33. 34. 23	35. 3. 29	36. 32. 40
5		43. 59. 52	45. 29. 37	46. 59. 30	48. 29. 31
10					39. 1. 42
11		46. 30. 52	48. 1. 21	49. 32. 4	51. 3. 0
12		58. 41. 5	60. 13. 23	61. 45. 55	63. 18. 41
13	The Sun.	71. 6. 10	72. 40. 22	74. 14. 49	75. 49. 32
14		83. 46. 55	85. 23. 8	86. 59. 37	88. 36. 21
15		96. 43. 55	98. 22. 12	100. 0. 43	101. 39. 29
16		109. 56. 58	111. 37. 12	113. 17. 39	114. 58. 19
15		39. 17. 26	41. 1. 53	42. 46. 39	44. 31. 44
16	Spica ♍	53. 21. 29	55. 8. 17	56. 55. 19	58. 42. 36
17		67. 42. 21	69. 30. 57	71. 19. 43	73. 8. 40
18		82. 15. 41			
18		37. 14. 15	39. 0. 18	40. 46. 43	42. 33. 29
19	Antares.	51. 31. 12	53. 19. 17	55. 7. 28	56. 55. 43
20		65. 57. 26	67. 45. 41	69. 33. 51	71. 21. 54
21	β Capricorni.	26. 2. 37	27. 51. 14	29. 39. 36	31. 27. 43
22		40. 24. 13	42. 10. 36	43. 56. 39	45. 42. 22
23		61. 50. 23	63. 20. 56	64. 51. 30	66. 22. 3
24	α Aquilæ	73. 53. 41	75. 23. 34	76. 53. 15	78. 22. 44
25		85. 46. 13	87. 14. 4	88. 41. 36	90. 8. 49
26		49. 32. 38	50. 57. 21	52. 22. 12	53. 47. 7
27	α Pegaſi.	60. 52. 6	62. 17. 5	63. 42. 1	65. 6. 54
28		72. 10. 12	73. 34. 37	74. 58. 59	76. 23. 15
29	α Arietis.	39. 48. 11	41. 10. 55	42. 33. 54	43. 57. 9
30		50. 56. 22			
30		16. 37. 33	18. 6. 15	19. 34. 55	21. 3. 34
31	Aldebaran.	28. 26. 52	29. 55. 37	31. 24. 26	32. 53. 18
S. 1		40. 18. 49			

Distances of ☽'s Center from Stars, and from ☉ west of her.

Days	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	α Arietis.	37. 41. 57	39. 3. 47	40. 25. 57	41. 48. 28
2		48. 45. 8	50. 9. 9	51. 33. 20	52. 57. 40
3	Aldebaran.	26. 9. 53	27. 38. 40	29. 7. 30	30. 36. 24
4		38. 1. 55	39. 31. 15	41. 0. 41	42. 30. 14
5		49. 59. 39			
10	The Sun.	40. 31. 6	42. 0. 43	43. 30. 33	45. 0. 36
11		52. 34. 10	54. 5. 33	55. 37. 10	57. 9. 1
12		64. 51. 42	66. 24. 57	67. 58. 27	69. 32. 11
13		77. 24. 29	78. 59. 42	80. 35. 11	82. 10. 55
14		90. 13. 21	91. 50. 36	93. 28. 7	95. 5. 53
15		103. 18. 30	104. 57. 45	106. 37. 15	108. 16. 59
16		116. 39. 12	118. 20. 17	120. 1. 34	
14	Spica ♍	32. 23. 2	34. 6. 6	35. 49. 32	37. 33. 18
15		46. 17. 7	48. 2. 47	49. 48. 44	51. 34. 58
16		60. 30. 8	62. 17. 52	64. 5. 49	65. 53. 59
17		74. 57. 48	76. 47. 4	78. 36. 28	80. 26. 1
18	Antares.	44. 20. 33	46. 7. 54	47. 55. 28	49. 43. 14
19		58. 44. 4	60. 32. 26	62. 20. 47	64. 9. 7
20		73. 9. 50			
20	β Capricorni.	18. 46. 14	20. 35. 36	22. 24. 47	24. 13. 48
21		33. 15. 36	35. 3. 12	36. 50. 30	38. 37. 30
22		47. 27. 44			
22	α Aquilæ.	55. 49. 23	57. 19. 23	58. 49. 35	60. 19. 55
23		67. 52. 36	69. 23. 4	70. 53. 23	72. 23. 36
24		79. 52. 0	81. 20. 58	82. 49. 39	84. 18. 4
25		91. 35. 43			
25	α Pegasi.	43. 55. 46	45. 19. 35	46. 43. 42	48. 8. 4
26		55. 12. 6	56. 37. 6	58. 2. 6	59. 27. 6
27		66. 31. 44	67. 56. 28	69. 21. 7	70. 45. 42
28		77. 47. 27			
28	α Arietis.	34. 20. 41	35. 41. 57	37. 3. 40	38. 25. 45
29		45. 20. 39	46. 44. 21	48. 8. 12	49. 32. 13
30	Aldebaran.	22. 32. 12	24. 0. 50	25. 29. 29	26. 58. 10
31		34. 22. 14	35. 51. 14	37. 20. 20	38. 49. 32

Configurations of the SATELLITES of JUPITER at 12 o' th' Clock at Night.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Th.	Giles.
2	F.	Lond. burnt, 1666, O.S.
3	Sa.	
4	*Su.*	*14th Sunday after Trinity.*
5	M.	
6	Tu.	
7	W.	Enurchus.
8	Th.	Nativity of B. V. Mary.
9	F.	
10	Sa.	
11	*Su.*	*15th Sunday after Trinity.*
12	M.	
13	Tu.	
14	W.	Holy Crofs.
15	Th.	
16	F.	
17	Sa.	Lambert.
18	*Su.*	*16th Sunday after Trinity.*
19	M.	
20	Tu.	
21	W.	*St. Matthew.*
22	Th.	*K. Geo.*III. *crown'd* 1761.
23	F.	
24	Sa.	
25	*Su.*	*17th Sunday after Trinity.*
26	M.	S. Cyprian.
27	Tu.	
28	W.	[*Aug. born.*
29	Th.	*St. Michael.* *Pri. Char.*
30	F.	S. Jerome.

Phaſes of the Moon.

	D.	H.	M.
New Moon —	5.	13.	59
Firſt Quarter —	12.	17.	27
Full Moon —	19.	13.	17
Laſt Quarter —	27.	7.	4

Other Phenomena.

D.

3. ☾ ☌ ☊ 14^h. 16′.
4. ☿ Stationary.
5. ☉ eclipſed, inviſible.
6. ☾ ☍ ♏ 9^h. 33′.
   ☿ ☌ ☊ diff. Lat. 14′.
   ☾ ♄ 16^h. 1′.
   ☾ ☊ ♑ 23^h. 43′.
7. ☾ ☌ ♏ 9^h. 27′.
8. ☾ ☍ ♏ 0^h. 1′.
9. ☾ ☌ ♏ 4^h. 55′.
10. ☾ ☌ ♎ 16^h. 54′.
    ☾ ☊ ♎ 20^h. 46.
11. ☾ ☌ ♎ 1^h. 58′.
14. ☿ ☌ ☊ diff. Lat. 47′.
15. ☾ ☍ ♈ 13^h. 30′.
    ☿ ☍ ☊ diff. Lat. 28′.
16. ☿ ☌ ☊ diff. Lat. 26′.
18. ☾ ☌ ♒ 4^h. 58′.
    ☾ ☍ ♒ 14^h. 32′.
21. ☿ ☍ ☊ diff. Lat. 57′.
22. ☉ enters ♎ at 12^h. 29′.
24. ☾ ☌ ♉ Im. 14^h. 11′. *
    ☌′ S. of ☽'s cent. Em. 15^h. 31′. * 2¼′ S.
    ☾ 1 ad ☽ ♉ 17^h. 4′.
    ☾ 2 ad ☽ ♉ 17^h. 34′.
    ☾ ☌ ♉ 22^h. 50′.
25. ☌ ☿ ♄ diff. Lat. 32′.
28. ☿ ☍ ☊ diff. Lat. 4′.
30. ☾ ☌ ☊ 22^h. 47′.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. North.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Th.	5. 9. 1. 17	10. 42. 29,3	8. 11. 47	0. 18,3	18,7
2	F.	5. 9. 59. 29	10. 46. 7,0	7. 49. 51	0. 37,0	19,0
3	Sa.	5. 10. 57. 42	10. 49. 44,5	7. 27. 48	0. 56,0	19,2
4	*Su.*	5. 11. 55. 58	10. 53. 21,8	7. 5. 38	1. 15,2	19,5
5	M.	5. 12. 54. 15	10. 56. 58,8	6. 43. 21	1. 34,7	19,8
6	Tu.	5. 13. 52. 34	11. 0. 35,6	6. 20. 57	1. 54,5	19,9
7	W.	5. 14. 50. 55	11. 4. 12,1	5. 58. 27	2. 14,4	20,1
8	Th.	5. 15. 49. 18	11. 7. 48,5	5. 35. 50	2. 34,5	20,3
9	F.	5. 16. 47. 42	11. 11. 24,8	5. 13. 8	2. 54,8	20,4
10	Sa.	5. 17. 46. 8	11. 15. 0,9	4. 50. 21	3. 15,2	20,6
11	*Su.*	5. 18. 44. 36	11. 18. 36,8	4. 27. 29	3. 35,8	20,7
12	M.	5. 19. 43. 5	11. 22. 12,6	4. 4. 33	3. 56,5	20,9
13	Tu.	5. 20. 41. 35	11. 25. 48,2	3. 41. 33	4. 17,4	20,9
14	W.	5. 21. 40. 7	11. 29. 23,7	3. 18. 28	4. 38,3	21,0
15	Th.	5. 22. 38. 41	11. 32. 59,3	2. 55. 20	4. 59,3	21,0
16	F.	5. 23. 37. 16	11. 36. 34,8	2. 32. 8	5. 20,3	21,1
17	Sa.	5. 24. 35. 53	11. 40. 10,3	2. 8. 54	5. 41,4	21,0
18	*Su.*	5. 25. 34. 32	11. 43. 45,8	1. 45. 37	6. 2,4	21,1
19	M.	5. 26. 33. 12	11. 47. 21,1	1. 22. 18	6. 23,5	21,0
20	Tu.	5. 27. 31. 54	11. 50. 56,5	0. 58. 58	6. 44,5	20,9
21	W.	5. 28. 30. 39	11. 54. 32,1	0. 35. 35	7. 5,4	20,8
22	Th.	5. 29. 29. 25	11. 58. 7,8	0. 12. 11 South.	7. 26,2	20,7
23	F.	6. 0. 28. 14	12. 1. 43,6	0. 11. 15	7. 46,9	20,6
24	Sa.	6. 1. 27. 5	12. 5. 19,6	0. 34. 41	8. 7,5	20,4
25	*Su.*	6. 2. 25. 59	12. 8. 55,7	0. 58. 7	8. 27,9	20,2
26	M.	6. 3. 24. 54	12. 12. 31,9	1. 21. 33	8. 48,1	20,0
27	Tu.	6. 4. 23. 51	12. 16. 8,4	1. 44. 59	9. 8,1	19,7
28	W.	6. 5. 22. 51	12. 19. 45,2	2. 8. 24	9. 27,8	19,5
29	Th.	6. 6. 21. 55	12. 23. 22,2	2. 31. 49	9. 47,3	19,2
30	F.	6. 7. 20. 59	12. 26. 59,4	2. 55. 12	10. 6,5	18,9

Days of the Month.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	15. 55,0	1. 4,3	2. 25,4	0. 003551	5. 13. 12
7	15. 56,5	1. 4,1	2. 25,8	0. 002894	5. 12. 53
13	15. 58,0	1. 4,0	2. 26,3	0. 002178	5. 12. 33
19	15. 59,5	1. 4,0	2. 26,7	0. 001439	5. 12. 14
25	16. 1,2	1. 4,1	2. 27,3	0. 000706	5. 11. 55

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Immerſions.		II. Satellite. Immerſions.		III. Satellite.		
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.	
1	19. 2. 28	1	15*11. 57	6	17. 25. 28	I
3	13*31. 26	5	4. 31. 49	6	19. 1. 27	E
5	8. 0. 27	8	17. 51. 40	13	21. 28. 30	I
7	2. 29. 28	12	7. 11. 30	13	23. 3. 53	E
8	20. 58. 33	15	20. 31. 22	21	1. 31. 34	I
10	15*27. 34	19	9*51. 19	21	3. 6. 23	E
12	9*56. 38	22	23. 11. 20	28	5. 34. 39	I
14	4. 25. 38	26	12*31. 18	28	7. 8. 51	E
15	22. 54. 45	30	1. 51. 15			
17	17. 23. 47					
19	11*52. 51					
21	6. 21. 55					
23	0. 50. 57					
24	19. 19. 59					
26	13*49. 4					
28	8*18. 7					
30	2. 47. 8					

IV. Satellite. Conjunctions.	
6	15* 7 Sup.
15	0. 17 Inf.
23	9*27 Sup.

Days	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Gr. El. 4ᵈ. ſup. ☌ 30ᵈ. 1½ʰ.						
1	1. 1. 17	1. 46 S	4. 21. 36	0. 40 S	13. 41 N	22. 53
7	2. 7. 47	2. 38 N	4. 27. 22	0. 48 N	13. 9	22, 56
13	3. 15. 16	6. 2	5. 6. 34	1. 37	10. 36	23. 13
19	4. 19. 9	6. 59	5. 17. 22	1. 50	6. 42	23. 32
25	5. 17. 27	5. 58	5. 28. 23	1. 38	2. 8	23. 50
VENUS.						
1	2. 21. 17	0. 24 N	4. 7. 49	0. 13 N	18. 32 N	22. 0
7	3. 0. 58	0. 58	4. 15. 4	0. 30	16. 49	22. 8
13	3. 10. 41	1. 30	4. 22. 20	0. 45	14. 48	22. 16
19	3. 20. 25	1. 59	4. 29. 39	0. 59	12. 33	22. 23
25	4. 0. 10	2. 25	5. 7. 0	1. 10	10. 3	22. 29
MARS.						
1	2. 14. 24	0. 49 N	3. 15. 56	0. 39 N	23. 10 N	20. 26
7	2. 17. 27	0. 54	3. 19. 41	0. 44	22. 45	20. 21
13	2. 20. 28	0. 59	3. 23. 23	0. 50	22. 16	20. 15
19	2. 23. 27	1. 4	3. 27. 1	0. 55	21. 41	20. 9
25	2. 26. 24	1. 9	4. 0. 36	1. 1	21. 2	20. 2
JUPITER.						
1	1. 5. 20	1. 11 S	1. 16. 6	1. 18 S	15. 26 N	16. 11
7	1. 5. 52	1. 10	1. 16. 5	1. 19	15. 24	15. 49
13	1. 6. 25	1. 10	1. 15. 59	1. 20	15. 22	15. 27
19	1. 6. 58	1. 9	1. 15. 45	1. 21	15. 17	15. 5
25	1. 7. 31	1. 9	1. 15. 24	1. 22	15. 10	14. 42
SATURN. ☌ 21ᵈ. 20¼ʰ.						
1	5. 28. 39	2. 18 N	5. 26. 48	2. 6 N	3. 12 N	1. 9
7	5. 28. 52	2. 19	5. 27. 32	2. 6	2. 54	0. 50
13	5. 29. 4	2. 19	5. 28. 16	2. 6	2. 37	0. 31
19	5. 29. 16	2. 19	5. 29. 0	2. 6	2. 20	0. 11
25	5. 29. 28	2. 19	5. 29. 45	2. 6	2. 2	23. 50

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Th.	3. 17. 5. 44	3. 23. 4. 23	4. 22. 58 S	4. 3. 5 S
2	F.	3. 29. 4. 51	4. 5. 7. 31	3. 40. 28	3. 15. 15
3	Sa.	4. 11. 12. 41	4. 17. 20. 41	2. 47. 40	2. 17. 56
4	*Su.*	4. 23. 31. 47	4. 29. 46. 4	1. 46. 22	1. 13. 8
5	M.	5. 6. 3. 47	5. 12. 25. 40	0. 38. 45 S	0. 3. 36 S
6	Tu.	5. 18. 49. 53	5. 25. 18. 26	0. 31. 54 N	1. 7. 23 N
7	W.	6. 1. 50. 28	6. 8. 26. 8	1. 42. 16	2. 16. 7
8	Th.	6. 15. 5. 14	6. 21. 47. 48	2. 48. 25	3. 18. 40
9	F.	6. 28. 33. 30	7. 5. 22. 28	3. 46. 22	4. 11. 6
10	Sa.	7. 12. 14. 21	7. 19. 9. 4	4. 32. 25	4. 49. 56
11	*Su.*	7. 26. 6. 21	8. 3. 6. 7	5. 3. 16	5. 12. 14
12	M.	8. 10. 8. 0	8. 17. 11. 55	5. 16. 38	5. 16. 9
13	Tu.	8. 24. 17. 30	9. 1. 24. 31	5. 10. 55	5. 0. 55
14	W.	9. 8. 32. 41	9. 15. 41. 39	4. 46. 14	4. 27. 8
15	Th.	9. 22. 50. 57	10. 0. 0. 24	4. 8. 46	3. 36. 39
16	F.	10. 7. 9. 22	10. 14. 17. 35	3. 6. 10	2. 32. 49
17	Sa.	10. 21. 24. 22	10. 28. 29. 22	1. 57. 15	1. 19. 57
18	*Su.*	11. 5. 32. 3	11. 12. 32. 0	0. 41. 43 N	0. 3. 5 N
19	M.	11. 19. 28. 40	11. 26. 21. 44	0. 35. 16 S	1. 12. 46 S
20	Tu.	0. 3. 10. 47	0. 9. 55. 32	1. 48. 50	2. 22. 58
21	W.	0. 16. 35. 40	0. 23. 11. 14	2. 54. 45	3. 23. 47
22	Th.	0. 29. 41. 59	1. 6. 8. 6	3. 49. 47	4. 12. 33
23	F.	1. 12. 29. 33	1. 18. 46. 31	4. 31. 52	4. 47. 41
24	Sa.	1. 24. 59. 25	2. 1. 8. 24	4. 59. 53	5. 8. 31
25	*Su.*	2. 7. 13. 55	2. 13. 16. 33	5. 13. 32	5. 15. 2
26	M.	2. 19. 16. 40	2. 25. 14. 50	5. 13. 5	5. 7. 45
27	Tu.	3. 1. 11. 34	3. 7. 7. 28	4. 59. 8	4. 47. 20
28	W.	3. 13. 3. 22	3. 18. 59. 37	4. 32. 29	4. 14. 39
29	Th.	3. 24. 56. 55	4. 0. 55. 47	3. 54. 4	3. 30. 50
30	F.	4. 6. 56. 53	4. 13. 0. 43	3. 5. 9	2. 37. 14

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Th.	27	21. 11	107. 57	114. 11	18. 1 N	17. 30 N
2	F.	28	21. 58	120. 26	126. 40	16. 46	15. 52
3	Sa.	29	22. 45	132. 53	139. 5	14. 45	13. 28
4	*Su.*	30	23. 32	145. 16	151. 26	12. 1	10. 25
5	M.	1	♂	157. 36	163. 45	8. 42	6. 51
6	Tu.	2	0. 20	169. 55	176. 7	4. 55	2. 54 N
7	W.	3	1. 8	182. 22	188. 39	0. 50 N	1. 16 S
8	Th.	4	1. 56	194. 59	201. 23	3. 22 S	5. 26
9	F.	5	2. 46	207. 53	214. 29	7. 27	9. 23
10	Sa.	6	3. 38	221. 12	228. 3	11. 12	12. 53
11	*Su.*	7	4. 32	235. 0	242. 6	14. 23	15. 42
12	M.	8	5. 28	249. 18	256. 37	16. 46	17. 36
13	Tu.	9	6. 25	264. 1	271. 29	18. 10	18. 27
14	W.	10	7. 25	278. 59	286. 29	18. 26	18. 7
15	Th.	11	8. 22	293. 58	301. 24	17. 31	16. 39
16	F.	12	9. 18	308. 45	316. 0	15. 30	14. 7
17	Sa.	13	10. 14	323. 9	330. 11	12. 32	10. 46
18	*Su.*	14	11. 8	337. 5	343. 53	8. 51	6. 49
19	M.	15	12. 0	350. 34	357. 9	4. 43	2. 34 S
20	Tu.	16	12. 50	3. 38	10. 3	0. 25 S	1. 45 N
21	W.	17	13. 39	16. 25	22. 43	3. 50 N	5. 52
22	Th.	18	14. 26	28. 58	35. 13	7. 47	9. 36
23	F.	19	15. 14	41. 27	47. 40	11. 17	12. 49
24	Sa.	20	16. 1	53. 53	60. 6	14. 11	15. 23
25	*Su.*	21	16. 49	66. 19	72. 33	16. 23	17. 13
26	M.	22	17. 37	78. 47	85. 1	17. 50	18. 16
27	Tu.	23	18. 24	91. 15	97. 29	18. 29	18. 30
28	W.	24	19. 12	103. 43	109. 57	18. 18	17. 55
29	Th.	25	19. 59	116. 9	122. 22	17. 20	16. 32
30	F.	26	20. 46	128. 32	134. 43	15. 34	14. 25

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Th.	14. 50	14. 52	54. 26	54. 34	5194	5183
2	F.	14. 54	14. 57	54. 42	54. 53	5173	5158
3	Sa.	15. 0	15. 4	55. 4	55. 18	5144	5125
4	*Su.*	15. 8	15. 12	55. 32	55. 47	5107	5087
5	M.	15. 16	15. 21	56. 3	56. 18	5067	5048
6	Tu.	15. 25	15. 29	56. 35	56. 50	5026	5006
7	W.	15. 34	15. 38	57. 6	57. 21	4986	4967
8	Th.	15. 42	15. 46	57. 37	57. 50	4947	4931
9	F.	15. 49	15. 53	58. 4	58. 17	4913	4897
10	Sa.	15. 56	15. 59	58. 30	58. 40	4881	4869
11	*Su.*	16. 2	16. 5	58. 51	59. 1	4855	4843
12	M.	16. 7	16. 10	59. 10	59. 18	4832	4822
13	Tu.	16. 11	16. 13	59. 25	59. 31	4813	4806
14	W.	16. 14	16. 15	59. 36	59. 39	4800	4797
15	Th.	16. 16	16. 16	59. 41	59. 41	4794	4794
16	F.	16. 15	16. 14	59. 39	59. 35	4797	4801
17	Sa.	16. 13	16. 10	59. 29	59. 21	4809	4819
18	*Su.*	16. 7	16. 4	59. 9	58. 56	4833	4849
19	M.	15. 59	15. 55	58. 40	58. 24	4869	4889
20	Tu.	15. 50	15. 44	58. 5	57. 46	4912	4936
21	W.	15. 38	15. 33	57. 25	57. 4	4962	4989
22	Th.	15. 27	15. 22	56. 43	56. 22	5015	5042
23	F.	15. 16	15. 11	56. 2	55. 43	5068	5093
24	Sa.	15. 6	15. 2	55. 26	55. 10	5115	5136
25	*Su.*	14. 58	14. 55	54. 57	54. 46	5153	5167
26	M.	14. 53	14. 51	54. 37	54. 30	5179	5189
27	Tu.	14. 50	14. 50	54. 26	54. 25	5194	5195
28	W.	14. 50	14. 51	54. 26	54. 30	5194	5189
29	Th.	14. 53	14. 55	54. 36	54. 45	5181	5169
30	F.	14. 58	15. 1	54. 56	55. 8	5154	5138

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	52. 3. 25	50. 41. 18	49. 19. 3	47. 56. 41
2		41. 2. 47	39. 39. 33		
7	Antares.	65. 1. 13	63. 24. 5	61. 46. 49	60. 9. 24
8		52. 0. 29	50. 22. 24	48. 44. 13	47. 6. 1
9		38. 55. 19	37. 17. 15	35. 39. 25	34. 1. 49
10		25. 59. 15			
10	ζ Aquilæ.	75. 53. 31	74. 21. 9	72. 48. 50	71. 16. 34
11		63. 37. 7	62. 5. 50	60. 34. 51	59. 4. 13
12		51. 37. 36	50. 10. 3	48. 43. 15	47. 17. 16
13	β Capricorni.	36. 28. 39	34. 42. 29	32. 56. 14	31. 9. 53
14		22. 17. 0	20. 30. 14	18. 43. 26	16. 56. 36
15	α Pegaſi.	58. 3. 50	56. 25. 47	54. 48. 5	53. 10. 48
16		45. 12. 25	43. 38. 51	42. 6. 10	40. 34. 26
17	α Arietis.	73. 1. 45	71. 18. 31	69. 35. 27	67. 52. 34
18		59. 21. 45	57. 40. 26	55. 59. 26	54. 18. 49
19		46. 2. 19	44. 24. 31	42. 47. 21	41. 10. 52
20		33. 20. 44			
20	Aldebaran.	63. 24. 51	61. 42. 55	60. 1. 17	58. 19. 58
21		49. 57. 59	48. 18. 30	46. 39. 21	45. 0. 30
22		36. 51. 8	35. 14. 12	33. 37. 35	32. 1. 17
23		24. 4. 30	22. 30. 3	20. 55. 54	19. 22. 3
24	Pollux.	56. 14. 20	54. 44. 29	53. 14. 58	51. 45. 48
25		44. 25. 6	42. 57. 59	41. 31. 12	40. 4. 49
26		32. 59. 20			
26	Regulus.	67. 33. 38	66. 4. 21	64. 35. 10	63. 6. 6
27		55. 41. 58	54. 13. 19	52. 44. 41	51. 16. 4
25	The Sun.	115. 5. 21	113. 42. 12	112. 19. 13	110. 56. 24
26		104. 4. 39	102. 42. 42	101. 20. 51	99. 59. 6
27		93. 11. 33	91. 50. 14	90. 28. 55	89. 7. 38
28		82. 20. 58	80. 59. 33	79. 38. 5	78. 16. 33
29		71. 27. 40	70. 5. 35	68. 43. 22	67. 21. 1
30		60. 26. 58	59. 3. 37	57. 40. 4	56. 16. 19
O. 1		49. 14. 16			

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	46. 34. 10	45. 11. 32	43. 48. 47	42. 25. 52
7		58. 31. 50	56. 54. 9	55. 16. 22	53. 38. 28
8	Antares.	45. 27. 48	43. 49. 36	42. 11. 28	40. 33. 22
9		32. 24. 26	30. 47. 26	29. 10. 52	27. 34. 47
10		69. 44. 21	68. 12. 15	66. 40. 20	65. 8. 37
11	α Aquilæ.	57. 33. 58	56. 4. 4	54. 34. 40	53. 5. 51
12		45. 52. 9			
12		43. 52. 19	41. 46. 33	40. 0. 41	38. 14. 43
13	β Capricorni.	29. 23. 28	27. 36. 57	25. 50. 22	24. 3. 43
14		15. 9. 44			
14		64. 38. 35	62. 59. 37	61. 20. 48	59. 42. 11
15	α Pegaſi.	51. 33. 59	49. 57. 39	48. 21. 53	46. 46. 47
16		39. 3. 43			
16		79. 56. 7	78. 12. 21	76. 28. 41	74. 45. 9
17	α Arietis.	66. 9. 55	64. 27. 29	62. 45. 17	61. 3. 22
18		52. 38. 37	50. 58. 49	49. 19. 28	47. 40. 37
19		39. 35. 8	38. 0. 10	36. 26. 3	34. 52. 53
20		56. 38. 57	54. 58. 15	53. 17. 51	51. 37. 46
21	Aldebaran.	43. 21. 58	41. 43. 47	40. 5. 55	38. 28. 22
22		30. 25. 18	28. 49. 38	27. 14. 17	25. 39. 14
23		17. 48. 29			
23		62. 17. 3	60. 45. 53	59. 15. 2	57. 44. 31
24	Pollux.	50. 16. 58	48. 48. 29	47. 20. 20	45. 52. 33
25		38. 38. 50	37. 13. 17	35. 48. 10	34. 23. 31
26	Regulus.	61. 37. 8	60. 8. 15	58. 39. 26	57. 10. 40
27		49. 47. 28			
24		120. 39. 54	119. 15. 58	117. 52. 14	116. 28. 42
25		109. 33. 45	108. 11. 16	106. 48. 56	105. 26. 43
26		98. 37. 26	97. 15. 52	95. 54. 22	94. 32. 56
27	The Sun.	87. 46. 21	86. 25. 2	85. 3. 43	83. 42. 21
28		76. 54. 58	75. 33. 17	74. 11. 31	72. 49. 38
29		65. 58. 32	64. 35. 54	63. 13. 6	61. 50. 7
30		54. 52. 22	53. 28. 12	52. 3. 47	50. 39. 9

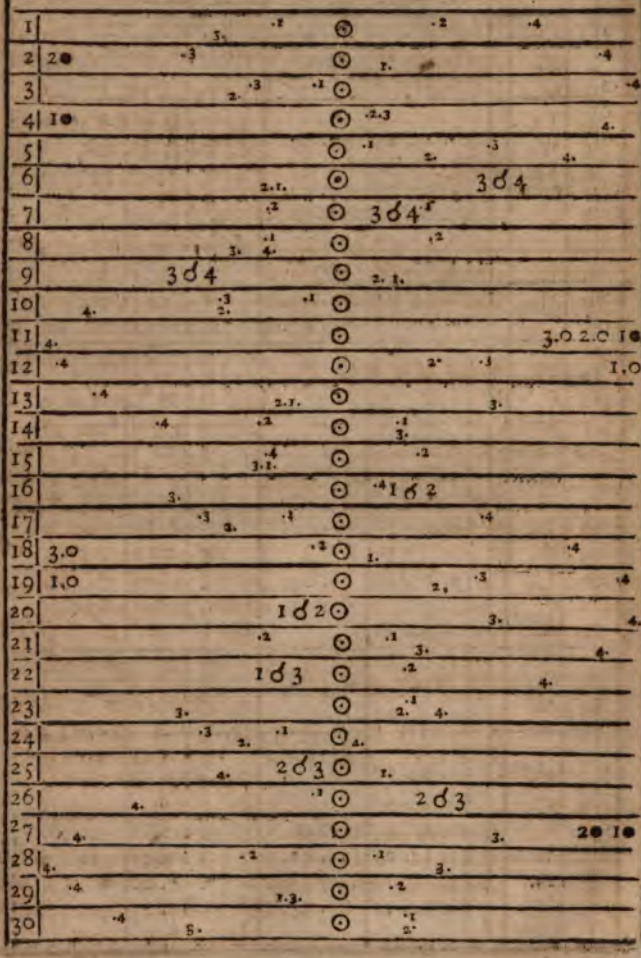
Distances of ☽'s Center from ☉, and from Stars west of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1		40. 18. 51	41. 48. 12	43. 17. 41	44. 47. 17
2	Aldebaran.	52. 17. 22	53. 47. 51	55. 18. 30	56. 49. 19
3		64. 25. 58	65. 57. 52	67. 29. 58	69. 2. 17
4		76. 47. 0			
9		41. 54. 7	43. 28. 46	45. 3. 35	46. 38. 35
10		54. 35. 55	56. 11. 51	57. 47. 55	59. 24. 9
11		67. 27. 21	69. 4. 25	70. 41. 36	72. 18. 56
12	The Sun.	80. 27. 23	82. 5. 27	83. 43. 38	85. 21. 56
13		93. 35. 2	95. 13. 58	96. 52. 59	98. 32. 6
14		106. 48. 58	108. 28. 34	110. 8. 14	111. 47. 58
15		120. 7. 15			
13	Spica ♍	63. 56. 14	65. 41. 54	67. 27. 41	69. 13. 34
14		78. 4. 30			
14		33. 13. 27	34. 55. 22	36. 37. 42	38. 20. 27
15	Antares.	46. 58. 59	48. 43. 26	50. 28. 3	52. 12. 49
16		60. 58. 12	62. 43. 29	64. 28. 48	66. 14. 9
17		20. 38. 21	22. 24. 59	24. 11. 33	25. 58. 1
18	β Capricorni.	34. 48. 26	36. 34. 5	38. 19. 34	40. 4. 52
19		48. 48. 14			
19		56. 58. 5	58. 27. 34	59. 57. 20	61. 27. 20
20	α Aquilæ.	68. 59. 16	70. 29. 45	72. 0. 14	73. 30. 39
21		81. 0. 47			
21		48. 11. 29	49. 37. 42	51. 4. 12	52. 30. 55
22	Fomalhaut.	59. 46. 44	61. 14. 5	62. 41. 27	64. 8. 48
23		71. 24. 15	72. 50. 59	74. 17. 35	75. 44. 2
24	α Pegasi.	68. 4. 2	69. 29. 52	70. 55. 35	72. 21. 12
25		79. 27. 28	80. 52. 22	82. 17. 9	83. 41. 49
26		47. 5. 58	48. 30. 22	49. 54. 52	51. 19. 29
27	ε Arietis.	58. 23. 52	59. 48. 59	61. 14. 10	62. 39. 25
28		36. 16. 50	37. 45. 39	39. 14. 32	40. 43. 28
29	Aldebaran.	48. 9. 27	49. 38. 58	51. 8. 37	52. 38. 24
30		60. 9. 43	61. 40. 31	63. 11. 31	64. 42. 44
O. 1		72. 22. 14			

Distances of ☽'s Center from ☉, and from Stars west of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Aldebaran.	46. 17. 1	47. 46. 53	49. 16. 54	50. 47. 3
2		58. 20. 18	59. 51. 27	61. 22. 46	62. 54. 16
3		70. 34. 48	72. 7. 32	73. 40. 28	75. 13. 37
8				38. 45. 21	40. 19. 38
9		48. 13. 45	49. 49. 3	51. 24. 31	53. 0. 8
10		61. 0. 31	62. 37. 1	64. 13. 39	65. 50. 26
11	The Sun.	73. 56. 23	75. 33. 57	77. 11. 38	78. 49. 27
12		87. 0. 21	88. 38. 52	90. 17. 29	91. 56. 13
13		100. 11. 18	101. 50. 36	103. 29. 59	105. 9. 26
14		113. 27. 45	115. 7. 35	116. 47. 27	118. 27. 20
12	Spica ♍	56. 54. 46	58. 39. 57	60. 25. 15	62. 10. 41
13		70. 59. 34	72. 45. 40	74. 31. 51	76. 18. 8
14	Antares.	40. 3. 34	41. 47. 1	43. 30. 43	45. 14. 44
15		53. 57. 44	55. 42. 44	57. 27. 48	59. 12. 57
16		67. 59. 30			
16	β Capricorni.	13. 31. 18	15. 18. 7	17. 4. 54	18. 51. 39
17		27. 44. 22	29. 30. 36	31. 16. 41	33. 2. 38
18		41. 49. 58	43. 34. 52	45. 19. 33	47. 4. 0
19	α Aquilæ.	62. 57. 32	64. 27. 53	65. 58. 16	67. 28. 44
20		75. 0. 57	76. 31. 9	78. 1. 12	79. 31. 6
21	Fomalhaut.	53. 57. 49	55. 24. 53	56. 52. 5	58. 19. 23
22		65. 36. 5	67. 3. 17	68. 30. 23	69. 57. 22
23		77. 10. 17			
23	α Pegasi.	62. 19. 45	63. 45. 58	65. 12. 5	66. 38. 6
24		73. 46. 42	75. 12. 4	76. 37. 19	78. 2. 27
25		85. 6. 22			
25	α Arietis.	41. 29. 49	42. 53. 37	44. 17. 35	45. 41. 42
26		52. 44. 12	54. 9. 0	55. 33. 53	56. 58. 50
27		64. 4. 44			
27	Aldebaran.	30. 21. 49	31. 50. 33	33. 19. 18	34. 48. 3
28		42. 12. 28	43. 41. 34	45. 10. 45	46. 40. 3
29		54. 8. 19	55. 38. 24	57. 8. 40	58. 39. 6
30		66. 14. 10	67. 45. 49	69. 17. 43	70. 49. 51

Configurations of the SATELLITES of JUPITER at 4 o' th' Clock in the Morning.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Sa.	Remigius.
2	*Su.*	*18th Sunday after Trinity.*
3	M.	
4	Tu.	
5	W.	
6	Th.	Faith.
7	F.	
8	Sa.	
9	*Su.*	*19th Su. af. Tr.* S. Denys.
10	M.	Oxf. and Camb. Terms
11	Tu.	[begin.
12	W.	
13	Th.	Tranſ. of K. Edw. Conf.
14	F.	
15	Sa.	
16	*Su.*	*20th Sunday after Trinity.*
17	M.	Etheldred.
18	Tu.	*St. Luke.*
19	W.	
20	Th.	
21	F.	
22	Sa.	
23	*Su.*	*21ſt Sunday after Trinity.*
24	M.	
25	Tu.	*K. Geo.* III. *Acceſ.* Criſp.
26	W.	*K. Geo.* III. *procl.* 1760.
27	Th.	
28	F.	
29	Sa.	*St. Simon and St. Jude.*
30	*Su.*	*22d Sunday after Trinity.*
31	M.	

Phaſes of the Moon.

	D.	H.	M.
New Moon —	5.	3.	0
Firſt Quarter—	11.	23.	33
Full Moon —	19.	2.	27
Laſt Quarter —	27.	3.	8

D. Other Phenomena.

1. ☿ ☌ ☊ diff. Lat. 20′.
2. ☾ ☍ ☊ 3h. 12′.
3. ☾ ☐ ☊ 7h. 33′.
   ☾ ☍ ♏ 17h. 50′.
7. ☾ △ ♎ 23h. 13′.
8. ☿ ☍ ♏ diff. Lat. 47′.
   ☾ ☌ ♎ 2h. 59′.
   ☾ ☍ ♉ 8h. 5′.
   ☾ ☌ Serpentar. 22h. 2′.
10. ♄ ☌ ♏ diff. Lat. 45′.
12. ☾ ☍ ♑ 19h. 28.
14. ☿ ☌ ♏ diff. Lat. 9′.
15. ☿ ♄ diff. Lat. 36′.
    ☾ ☌ ♒ Im. 13h. 26′. * 10′ S. of ☽'s cent. Em. 14h. 13′. * 9′¼ S. of ☽'s cent.
    ☾ ☍ ♒ 22h. 12′.
20. ☾ ☍ Ceti 1h. 46′.
21. ☾ △ ♉ 23h. 32′.
22. ☾ ☍ ☌ ♉ 1h. 38′.
    ☾ ☍ ☌ ♉ 2h. 8′.
    ☾ ☍ ♉ 7h. 21′.
    ☉ enters ♏ at 20h. 19′.
25. ☿ ☍ ♃ ♎ diff. Lat. 21′.
    ☿ ☍ ♏ diff Lat. 44′.
29. ☾ ☐ ☊ 12h. 25′.
30. ☾ △ ☊ 17h. 5′.
31. ☾ ☍ ♏ 3h. 26′.
    ☾ ☌ ♏ Im. 15h. 38′. * 9′ N. of ☽'s cent. Em. 16h. 27′. * 7′ N. of ☽'s cent.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. South.	Equat. of Time Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Sa.	6. 8. 20. 7	12. 30. 37,1	3. 18. 33	10.25,4	18,6
2	*Su.*	6. 9. 19. 17	12. 34. 15,0	3. 41. 53	10.44,0	18,3
3	M.	6. 10. 18. 29	12. 37. 53,2	4. 5. 10	11. 2,3	17,9
4	Tu.	6. 11. 17. 43	12. 41. 31,8	4. 28. 24	11.20,2	17,6
5	W.	6. 12. 16. 59	12. 45. 10,7	4. 51. 34	11.37,8	17,2
6	Th.	6. 13. 16. 18	12. 48. 50,0	5. 14. 42	11.55,0	16,8
7	F.	6. 14. 15. 38	12. 52. 29,7	5. 37. 45	12.11,8	16,4
8	Sa.	6. 15. 15. 0	12. 56. 9,8	6. 0. 44	12.28,2	16,0
9	*Su.*	6. 16. 14. 25	12. 59. 50,4	6. 23. 38	12.44,2	15,5
10	M.	6. 17. 13. 51	13. 3. 31,4	6. 46. 27	12.59,7	15,1
11	Tu.	6. 18. 13. 18	13. 7. 12,8	7. 9. 10	13.14,8	14,6
12	W.	6. 19. 12. 48	13. 10. 54,7	7. 31. 48	13.29,4	14,1
13	Th.	6. 20. 12. 19	13. 14. 37,1	7. 54. 19	13.43,5	13,6
14	F.	6. 21. 11. 52	13. 18. 20,0	8. 16. 43	13.57,1	13,1
15	Sa.	6. 22. 11. 26	13. 22. 3,4	8. 39. 0	14.10,2	12,6
16	*Su.*	6. 23. 11. 2	13. 25. 47,4	9. 1. 9	14.22,8	11,9
17	M.	6. 24. 10. 40	13. 29. 31,9	9. 23. 11	14.34,7	11,4
18	Tu.	6. 25. 10. 20	13. 33. 17,1	9. 45. 5	14.46,1	10,8
19	W.	6. 26. 10. 2	13. 37. 2,9	10. 6. 50	14.56,9	10,1
20	Th.	6. 27. 9. 46	13. 40. 49,2	10. 28. 26	15. 7,0	9,5
21	F.	6. 28. 9. 32	13. 44. 36,3	10. 49. 53	15.16,5	8,8
22	Sa.	6. 29. 9. 20	13. 48. 24,0	11. 11. 10	15.25,3	8,1
23	*Su.*	7. 0. 9. 10	13. 52. 12,4	11. 32. 17	15.33,4	7,4
24	M.	7. 1. 9. 2	13. 56. 1,5	11. 53. 14	15.40,8	6,7
25	Tu.	7. 2. 8. 57	13. 59. 51,4	12. 14. 0	15.47,5	6,0
26	W.	7. 3. 8. 53	14. 3. 42,0	12. 34. 35	15.53,5	5,2
27	Th.	7. 4. 8. 52	14. 7. 33,3	12. 54. 58	15.58,7	4,4
28	F.	7. 5. 8. 54	14. 11. 25,5	13. 15. 9	16. 3,1	3,6
29	Sa.	7. 6. 8. 58	14. 15. 18,4	13. 35. 8	16. 6,7	2,8
30	*Su.*	7. 7. 9. 3	14. 19. 12,1	13. 54. 54	16. 9,5	2,0
31	M.	7. 8. 9. 11	14. 23. 6,6	14. 14. 27	16.11,5	1,2

Days of the Month.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 2,9	1. 4,3	2. 27,8	9. 999975	5. 11. 36
7	16. 4,5	1. 4,6	2. 28,4	9. 999227	5. 11. 17
13	16. 6,1	1. 5,0	2. 28,9	9. 998462	5. 10. 58
19	16. 7,8	1. 5,5	2. 29,3	9. 997714	5. 10. 39
25	16. 9,4	1. 6,1	2. 29,8	9. 997015	5. 10. 20

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Immersions.		II. Satellite. Immersions.		III. Satellite. Immersions.	
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.
1	21. 16. 12	3	15*11. 7	5	9*37. 28
3	15*45. 13	7	4. 31. 8	12	13*39. 45
5	10*14. 12	10	17. 50. 57	19	17*42. 2
7	4. 43. 13	14	7*10. 41	26	21. 43. 54
8	23. 12. 11	17	20. 30. 18		
10	17*41. 9	21	9*49. 52	IV. Satellite.	Conj.
12	12*10. 4	24	23 9. 20		
14	6. 39. 0	28	12*28. 37	1	17. 56 Inf.
16	1. 7. 54			10	3. 46 Sup.
17	19. 36. 47			18	12*10 Inf.
19	14* 5. 38			26	22. 2 Sup.
21	8*34. 28				
23	3. 3. 17				
24	21. 32. 4				
26	16* 0. 48				
28	10*29. 30				
30	4. 58. 11				
31	23. 26. 49				

Days	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY.						
1	6. 10. 53	4. 1 N	6. 9. 5	1. 10 N	2. 32 S	0. 5
7	7. 0. 55	1. 48 N	6. 19. 18	0. 33 N	7. 3	0. 20
13	7. 18. 50	0. 22 S	6. 29. 5	0. 7 S	11. 16	0. 33
19	8. 5. 37	2. 23	7. 8. 29	0. 48	15. 6	0. 46
25	8. 22. 6	4. 9	7. 17. 32	1. 26	18. 27	0. 59
VENUS.						
1	4. 9. 54	2. 47 N	5. 14. 23	1. 20 N	7. 23 N	22. 35
7	4. 19. 40	3. 4	5. 21. 47	1. 27	4. 35	22. 40
13	4. 29. 25	3. 16	5. 29. 14	1. 31	1. 42 N	22. 46
19	5. 9. 10	3. 22	6. 6. 41	1. 32	1. 15 S	22. 51
25	5. 18. 54	3. 23	6. 14. 10	1. 31	4. 11	22. 55
MARS.						
1	2. 29. 20	1. 13 N	4. 4. 8	1. 7 N	20. 20 N	19. 55
7	3. 2. 14	1. 17	4. 7. 35	1. 12	19. 34	19. 48
13	3. 5. 7	1. 21	4. 10. 58	1. 19	18. 46	19. 39
19	3. 7. 59	1. 25	4. 14. 16	1. 25	17. 55	19. 30
25	3. 10. 49	1. 28	4. 17. 29	1. 31	17. 3	19. 20
JUPITER.						
1	1. 8. 3	1. 9 S	1. 14. 56	1. 22 S	15. 1 N	14. 19
7	1. 8. 36	1. 9	1. 14. 23	1. 23	14. 50	13. 55
13	1. 9. 9	1. 8	1. 13. 44	1. 24	14. 39	13. 30
19	1. 9. 41	1. 8	1. 13. 0	1. 24	14. 26	13. 4
25	1. 10. 14	1. 7	1. 12. 14	1. 24	14. 12	12. 38
SATURN.						
1	5. 29. 40	2. 19 N	6. 0. 29	2. 6 N	1. 44 N	23. 32
7	5. 29. 52	2. 20	6. 1. 13	2. 7	1. 27	23. 12
13	6. 0. 4	2. 20	6. 1. 57	2. 7	1. 10	22. 53
19	6. 0. 16	2. 20	6. 2. 40	2. 8	0. 54	22. 33
25	6. 0. 28	2. 20	6. 3. 21	2. 9	0. 38	22. 13

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Sa.	4. 19. 7. 52	4. 25. 18. 42	2. 7. 12 S	1. 35. 27 S
2	*Su.*	5. 1. 33. 38	5. 7. 52. 59	1. 2. 12 S	0. 27. 49 S
3	M.	5. 14. 17. 7	5. 20. 46. 16	0. 7. 17 N	0. 42. 44 N
4	Tu.	5. 27. 20. 2	6. 3. 58. 51	1. 18. 0	1. 52. 40
5	W.	6. 10. 42. 31	6. 17. 30. 48	2. 26. 6	2. 57. 51
6	Th.	6. 24. 23. 22	7. 1. 19. 42	3. 27. 22	3. 54. 0
7	F.	7. 8. 19. 35	7. 15. 22. 18	4. 17. 23	4. 36. 59
8	Sa.	7. 22. 27. 23	7. 29. 34. 11	4. 52. 29	5. 3. 30
9	*Su.*	8. 6. 42. 13	8. 13. 50. 50	5. 9. 52	5. 11. 25
10	M.	8. 20. 59. 39	8. 28. 8. 0	5. 8. 9	5. 0. 6
11	Tu.	9. 5. 15. 41	9. 12. 22. 20	4. 47. 27	4. 30. 22
12	W.	9. 19. 27. 39	9. 26. 31. 19	4. 9. 10	3. 44. 18
13	Th.	10. 3. 33. 19	10. 10. 33. 21	3. 16. 8	2. 45. 8
14	F.	10. 17. 31. 27	10. 24. 27. 22	2. 11. 50	1. 36. 45
15	Sa.	11. 1. 21. 9	11. 8. 12. 31	1. 0. 28 N	0. 23. 32 N
16	*Su.*	11. 15. 1. 29	11. 21. 47. 55	0. 13. 29 S	0. 50. 3 S
17	M.	11. 28. 31. 38	0. 5. 12. 32	1. 25. 36	1. 59. 42
18	Tu.	0. 11. 50. 29	0. 18. 25. 14	2. 31. 54	3. 1. 43
19	W.	0. 24. 56. 48	1. 1. 24. 57	3. 28. 53	3. 53. 5
20	Th.	1. 7. 49. 40	1. 14. 10. 50	4. 14. 6	4. 31. 41
21	F.	1. 20. 28. 26	1. 26. 42. 36	4. 45. 49	4. 56. 23
22	Sa.	2. 2. 53. 21	2. 9. 1. 0	5. 3. 20	5. 6. 46
23	*Su.*	2. 15. 5. 30	2. 21. 7. 25	5. 6. 37	5. 3. 6
24	M.	2. 27. 7. 1	3. 3. 4. 43	4. 56. 14	4. 46. 13
25	Tu.	3. 9. 1. 4	3. 14. 56. 26	4. 33. 5	4. 17. 6
26	W.	3. 20. 51. 35	3. 26. 46. 59	3. 58. 20	3. 37. 3
27	Th.	4. 2. 43. 17	4. 8. 41. 13	3. 13. 16	2. 47. 21
28	F.	4. 14. 41. 24	4. 20. 44. 26	2. 19. 22	1. 49. 39
29	Sa.	4. 26. 51. 5	5. 3. 1. 53	1. 18. 23	0. 45. 52 S
30	*Su.*	5. 9. 17. 27	5. 15. 38. 19	0. 12. 26 S	0. 21. 37 N
31	M.	5. 22. 4. 57	5. 28. 37. 34	0. 55. 54 N	1. 20. 53

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſcen. at Midn.	☽'s Declinat. at Noon.	☽'s Declinat. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Sa.	27	21. 34	140. 53	147. 3	13. 4 N	11. 36 N
2	*Su.*	28	22. 21	153. 12	159. 23	9. 58	8. 11
3	M.	29	23. 9	165. 34	171. 48	6. 18	4. 19
4	Tu.	30	23. 58	178. 4	184. 24	2. 15 N	0. 8 N
5	W.	1	♂	190. 48	197. 17	2. 0 S	4. 9 S
6	Th.	2	0. 48	203. 52	210. 33	6. 15	8. 17
7	F.	3	1. 41	217. 21	224. 17	10. 14	12. 2
8	Sa.	4	2. 35	231. 19	238. 29	13. 41	15. 8
9	*Su.*	5	3. 31	245. 46	253. 8	16. 22	17. 20
10	M.	6	4. 29	260. 34	268. 2	18. 2	18. 27
11	Tu.	7	5. 28	275. 32	283. 1	18. 34	18. 24
12	W.	8	6. 26	290. 27	297. 48	17. 56	17. 12
13	Th.	9	7. 22	305. 5	312. 14	16. 12	14. 58
14	F.	10	8. 16	319. 17	326. 13	13. 30	11. 52
15	Sa.	11	9. 9	333. 1	339. 43	10. 4	8. 8
16	*Su.*	12	9. 59	346. 18	352. 48	6. 7	4. 1 S
17	M.	13	10. 48	359. 13	5. 34	1. 54 S	0. 14 N
18	Tu.	14	11. 37	11. 53	18. 9	2. 21 N	4. 26
19	W.	15	12. 24	24. 23	30. 37	6. 26	8. 20
20	Th.	16	13. 12	36. 51	43. 5	10. 8	11. 47
21	F.	17	14. 0	49. 20	55. 35	13. 18	14. 38
22	Sa.	18	14. 48	61. 51	68. 8	15. 48	16. 46
23	*Su.*	19	15. 36	74. 25	80. 42	17. 33	18. 8
24	M.	20	16. 23	86. 58	93. 14	18. 30	18. 40
25	Tu.	21	17. 11	99. 29	105. 43	18. 37	18. 22
26	W.	22	17. 58	111. 55	118. 6	17. 55	17. 16
27	Th.	23	18. 45	124. 15	130. 22	16. 26	15. 25
28	F.	24	19. 31	136. 28	142. 33	14. 13	12. 52
29	Sa.	25	20. 17	148. 37	154. 42	11. 21	9. 41
30	*Su.*	26	21. 4	160. 48	166. 55	7. 54	6. 0
31	M.	27	21. 51	173. 6	179. 20	4. 0	1. 55

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Mid.
		M. S.	M. S.	M. S.	M. S.		
1	Sa.	15. 6	15. 10	55. 24	55. 40	5118	5097
2	*Su.*	15. 15	15. 21	55. 58	56. 17	5073	5049
3	M.	15. 26	15. 31	56. 37	56. 57	5023	4998
4	Tu.	15. 37	15. 42	57. 18	57. 37	4971	4947
5	W.	15. 47	15. 52	57. 56	58. 14	4923	4901
6	Th.	15. 56	16. 0	58. 30	58. 44	4881	4864
7	F.	16. 4	16. 7	58. 57	59. 8	4848	4834
8	Sa.	16. 9	16. 11	59. 17	59. 24	4823	4815
9	*Su.*	16. 13	16. 13	59. 29	59. 32	4809	4805
10	M.	16. 14	16. 13	59. 33	59. 33	4804	4804
11	Tu.	16. 13	16. 12	59. 31	59. 28	4806	4810
12	W.	16. 11	16. 10	59. 24	59. 19	4815	4821
13	Th.	16. 8	16. 6	59. 12	59. 5	4830	4838
14	F.	16. 4	16. 1	58. 57	58. 48	4848	4859
15	Sa.	15. 58	15. 55	58. 37	58. 26	4872	4886
16	*Su.*	15. 52	15. 49	58. 14	58. 1	4901	4917
17	M.	15. 45	15. 41	57. 47	57. 32	4934	4953
18	Tu.	15. 37	15. 32	57. 17	57. 1	4972	4992
19	W.	15. 28	15. 23	56. 44	56. 27	5014	5036
20	Th.	15. 19	15. 14	56. 11	55. 55	5056	5077
21	F.	15. 10	15. 6	55. 39	55. 24	5098	5118
22	Sa.	15. 2	14. 59	55. 11	54. 58	5134	5152
23	*Su.*	14. 56	14. 53	54. 47	54. 38	5166	5178
24	M.	14. 51	14. 50	54. 30	54. 26	5189	5194
25	Tu.	14. 49	14. 49	54. 23	54. 22	5198	5199
26	W.	14. 49	14. 51	54. 24	54. 29	5197	5190
27	Th.	14. 53	14. 55	54. 36	54. 45	5181	5169
28	F.	14. 58	15. 2	54. 57	55. 12	5153	5133
29	Sa.	15. 7	15. 12	55. 29	55. 48	5111	5086
30	*Su.*	15. 18	15. 24	56. 9	56. 32	5059	5029
31	M.	15. 31	15. 38	56. 55	57. 20	5000	4968

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	49. 14. 16	47. 49. 10	46. 23. 50	44. 58. 15
7		79. 25. 15	77. 50. 47	76. 16. 20	74. 41. 54
8	α Aquilæ.	66. 51. 17	65. 17. 43	63. 44. 26	62. 11. 27
9		54. 32. 51	53. 2. 48	51. 33. 28	50. 4. 56
10	β Capri-	39. 45. 38	37. 58. 58	36. 12. 20	34. 25. 44
11	corni.	25. 33. 12	23. 46. 51	22. 0. 34	20. 14. 22
12		61. 12. 22	59. 34. 59	57. 57. 59	56. 21. 22
13	α Pegaſi.	48. 25. 41	46. 52. 23	45. 19. 50	43. 48. 7
14		36. 25. 12			
14		76. 48. 47	75. 7. 40	73. 26. 41	71. 45. 52
15	α Arietis.	63. 24. 41	61. 45. 8	60. 5. 52	58. 26. 53
16		50. 16. 41	48. 39. 45	47. 3. 16	45. 27. 14
17		68. 5. 2	66. 24. 12	64. 43. 33	63. 3. 7
18		54. 43. 57	53. 4. 46	51. 25. 48	49. 47. 4
19	Aldeba-	41. 36. 41	39. 59. 18	38. 22. 10	36. 45. 16
20	ran.	28. 44. 19	27. 8. 51	25. 33. 37	23. 58. 38
21		16. 7. 21			
21		60. 37. 0	59. 5. 35	57. 34. 28	56. 3. 39
22	Pollux.	48. 34. 17	47. 5. 22	45. 36. 46	44. 8. 31
23		36. 53. 12			
23		71. 43. 29	70. 13. 10	68. 43. 0	67. 13. 1
24		59. 45. 6	58. 15. 53	56. 46. 45	55. 17. 43
25	Regulus.	47. 53. 39	46. 25. 2	44. 56. 26	43. 27. 52
26		36. 5. 1	34. 36. 24	33. 7. 45	31. 39. 4
27		24. 14. 42	22. 45. 35	21. 16. 22	19. 47. 3
24				121. 10. 26	119. 49. 4
25		113. 3. 15	111. 42. 16	110. 21. 18	109. 0. 21
26		102. 15. 30	100. 54. 29	99. 33. 24	98. 12. 16
27	The Sun.	91. 25. 27	90. 3. 47	88. 41. 58	87. 20. 2
28		80. 27. 58	79. 5. 2	77. 41. 53	76. 18. 31
29		69. 18. 13	67. 53. 24	66. 28. 18	65. 2. 55
30		57. 51. 36	56. 24. 24	54. 56. 53	53. 29. 2
31		46. 4. 40	44. 34. 46	43. 4. 33	41. 34. 0

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	The Sun.	43. 32. 24	42. 6. 17	40. 39. 55	39. 13. 17
6		85. 42. 40	84. 8. 26	82. 34. 6	80. 59. 42
7	α Aquilæ.	73. 7. 32	71. 33. 15	69. 59. 6	68. 25. 6
8		60. 38. 49	59. 6. 35	57. 34. 49	56. 3. 33
9		48. 37. 15			
9		46. 52. 33	45. 5. 47	43. 19. 2	41. 32. 19
10	β Capricorni.	32. 39. 9	30. 52. 36	29. 6. 5	27. 19. 37
11		18. 28. 15			
11		67. 45. 7	66. 6. 31	64. 28. 10	62. 50. 7
12	α Pegaſi.	54. 45. 12	53. 9. 29	51. 34. 18	49. 59. 41
13		42. 17. 20	40. 47. 33	39. 18. 53	37. 51. 25
14		70. 5. 13	68. 24. 45	66. 44. 30	65. 4. 29
15	α Arietis.	56. 48. 11	55. 9. 46	53. 31. 43	51. 54. 1
16		43. 51. 41			
16		74. 50. 13	73. 8. 39	71. 27. 16	69. 46. 4
17		61. 22. 52	59. 42. 49	58. 2. 59	56. 23. 22
18	Aldebaran.	48. 8. 33	46. 30. 14	44. 52. 9	43. 14. 18
19		35. 8. 37	33. 32. 11	31. 55. 59	30. 20. 2
20		22. 23. 54	20. 49. 24	19. 15. 8	17. 41. 7
21	Pollux.	54. 33. 9	53. 2. 57	51. 33. 5	50. 3. 31
22		42. 40. 38	41. 13. 9	39. 46. 4	38. 19. 25
23		65. 43. 10	64. 13. 28	62. 43. 53	61. 14. 26
24		53. 48. 46	52. 19. 54	50. 51. 5	49. 22. 20
25	Regulus.	41. 59. 19	40. 30. 45	39. 2. 11	37. 33. 36
26		30. 10. 20	28. 41. 32	27. 12. 40	25. 43. 43
27		18. 17. 38			
24		118. 27. 47	117. 6. 34	115. 45. 24	114. 24. 18
25		107. 39. 25	106. 18. 28	104. 57. 30	103. 36. 30
26		96. 51. 5	95. 29. 49	94. 8. 27	92. 47. 0
27	The Sun.	85. 57. 57	84. 35. 43	83. 13. 18	81. 50. 43
28		74. 54. 57	73. 31. 8	72. 7. 5	70. 42. 46
29		63. 37. 16	62. 11. 19	60. 45. 3	59. 18. 29
30		52. 0. 51	50. 32. 19	49. 3. 26	47. 34. 13
31		40. 3. 6			

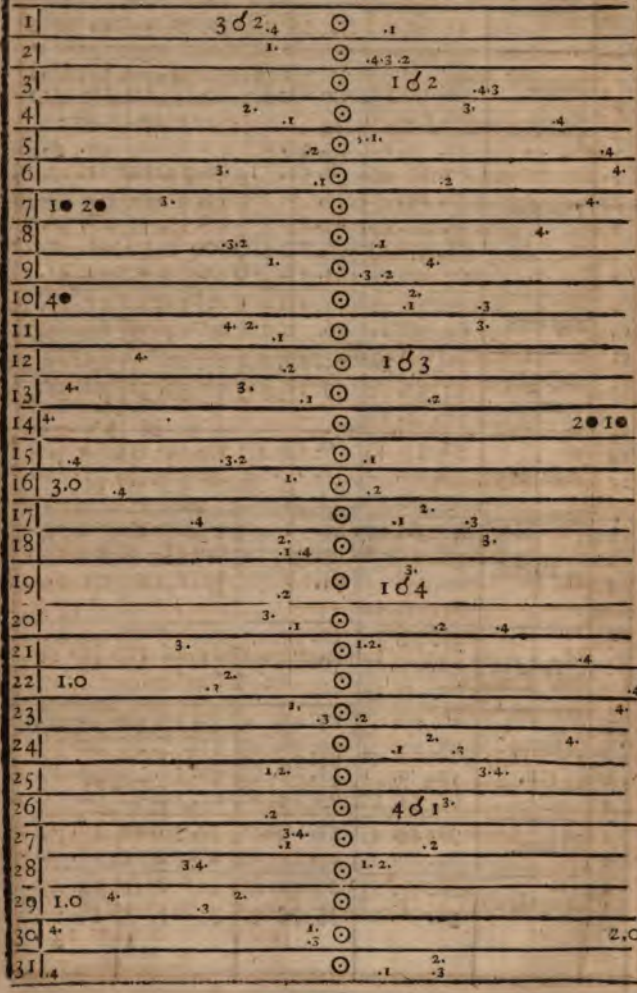
Distances of ☽'s Center from Stars, and from ☉ west of her.

Days.	Stars Names.	Noon.	3 Hours.	6 H6ours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Pollux.	30. 16. 21	31. 42. 36	33. 9. 34	34. 37. 14
2		42. 4. 39	43. 35. 44	45. 7. 18	46. 39. 20
3		54. 26. 13	56. 0. 50	57. 35. 51	59. 11. 15
8	The Sun.		39. 7. 15	40. 45. 52	42. 24. 35
9		50. 39. 18	52. 18. 23	53. 57. 30	55. 36. 39
10		63. 52. 36	65. 31. 46	67. 10. 54	68. 50. 1
11		77. 5. 8	78. 44. 3	80. 22. 54	82. 1. 43
12		90. 14. 49	91. 53. 12	93. 31. 30	95. 9. 44
13		103. 19. 40	104. 57. 22	106. 34. 57	108. 12. 27
14		116. 18. 20	117. 55. 10	119. 31. 51	121. 8. 25
12	Antares.	43. 40. 41	45. 23. 33	47. 6. 30	48. 49. 32
13		57. 25. 31	59. 8. 43	60. 51. 54	62. 35. 3
14		71. 10. 12			
14	β Capricorni.	16. 46. 0	18. 30. 14	20. 14. 23	21. 58. 27
15		30. 37. 16	32. 20. 39	34. 3. 54	35. 47. 1
16		44. 20. 26	46. 2. 39	47. 44. 42	49. 26. 36
17	α Aquilæ.	64. 52. 38	66. 21. 20	67. 50. 8	69. 19. 3
18		76. 44. 0	78. 12. 52	79. 41. 39	81. 10. 21
19		88. 31. 48			
19	α Pegasi.	40. 59. 31	42. 22. 59	43. 47. 0	45. 11. 31
20		52. 19. 20	53. 45. 34	55. 11. 56	56. 38. 24
21		63. 51. 18	65. 17. 52	66. 44. 23	68. 10. 51
22		75. 21. 51	76. 47. 45	78. 13. 33	79. 39. 15
23	α Arietis.	43. 8. 2	44. 32. 42	45. 57. 30	47. 22. 25
24		54. 28. 8	55. 53. 27	57. 18. 48	58. 44. 10
25	Aldebaran.	32. 15. 25	33. 44. 7	35. 12. 47	36. 41. 26
26		44. 4. 47	45. 33. 31	47. 2. 17	48. 31. 7
27		55. 56. 28	57. 25. 51	58. 55. 22	60. 25. 2
28		67. 55. 44			
28	Pollux.	26. 7. 43	27. 30. 26	28. 54. 3	30. 18. 31
29		37. 31. 24	38. 59. 47	40. 28. 42	41. 58. 7
30		49. 32. 35			
30	Regulus.	12. 36. 33	14. 10. 48	15. 45. 32	17. 20. 44
31		25. 23. 11	27. 0. 53	28. 38. 58	30. 17. 28
N. 1		38. 35. 58			

Distances of ☽'s Center from Stars, and from ☉ west of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Pollux.	36. 5. 33	37. 34. 29	39. 4. 0	40. 34. 4
2		48. 11. 51	49. 44. 48	51. 18. 11	52. 51. 59
3		60. 47. 0			
8	The Sun.	44. 3. 24	45. 42. 17	47. 21. 14	49. 0. 14
9		57. 15. 49	58. 55. 1	60. 34. 12	62. 13. 24
10		70. 29. 6	72. 8. 10	73. 47. 11	75. 26. 11
11		83. 40. 28	85. 19. 10	86. 57. 47	88. 36. 20
12		96. 47. 53	98. 25. 58	100. 3. 57	101. 41. 52
13		109. 49. 50	111. 27. 8	113. 4. 19	114. 41. 23
12	Antares.	50. 32. 40	52. 15. 50	53. 59. 2	55. 42. 16
13		64. 18. 11	66. 1. 16	67. 44. 18	69. 27. 17
14	β Capricorni.	23. 42. 26	25. 26. 19	27. 10. 5	28. 53. 44
15		37. 30. 0	39. 12. 50	40. 55. 31	42. 38. 3
16		51. 8. 19			
16	α Aquilæ.	58. 59. 43	60. 27. 37	61. 55. 45	63. 24. 6
17		70. 48. 2	72. 17. 3	73. 46. 3	75. 15. 2
18		82. 38. 56	84. 7. 23	85. 35. 41	87. 3. 50
19	α Pegasi.	46. 36. 27	48. 1. 46	49. 27. 23	50. 53. 15
20		58. 4. 56	59. 31. 31	60. 58. 6	62. 24. 42
21		69. 37. 15	71. 3. 32	72. 29. 44	73. 55. 51
22		81. 4. 49			
22	α Arietis.	37. 31. 30	38. 55. 17	40. 19. 19	41. 43. 34
23		48. 47. 25	50. 12. 30	51. 37. 39	53. 2. 52
24		60. 9. 34			
24	Aldebaran.	26. 20. 3	27. 49. 0	29. 17. 52	30. 46. 40
25		38. 10. 4	39. 38. 43	41. 7. 23	42. 36. 4
26		50. 0. 1	51. 28. 59	52. 58. 3	54. 27. 12
27		61. 54. 50	63. 24. 48	64. 54. 56	66. 25. 14
28	Pollux.	31. 43. 45	33. 9. 42	34. 36. 20	36. 3. 34
29		43. 28. 3	44. 58. 29	46. 29. 24	48. 0. 46
30	Regulus.	18. 56. 23	20. 32. 28	22. 8. 58	23. 45. 53
31		31. 56. 22	33. 35. 40	35. 15. 22	36. 55. 28

Configurations of the SATELLITES of JUPITER at 8 o'th' Clock in the Evening.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	*All Saints.*
2	W.	
3	Th.	On mor. of All Souls, 1
4	F.	[ret.
5	Sa.	*Powder Plot*, 1605.
		——— [Ter. begins.
6	*Su.*	*23d Su. aft. Tr.* Leon. M.
7	M.	*D. of Cumberland born.*
8	Tu.	
9	W.	
10	Th.	
11	F.	S. Martin. [C. Ter. div. m.
12	Sa.	On mor. of S. Mart. 2 ret.
13	*Su.*	*24th Su. aft. Tr.* Britius.
14	M.	
15	Tu.	Machutus,
16	W.	
17	Th.	Hugh Bp. of Lincoln.
18	F.	In 8 days of S. Martin,
19	Sa.	[3 ret.
20	*Su.*	*25th Sunday after Trinity.*
21	M.	[Edmund
22	Tu.	Cecilia.
23	W.	St. Clement.
24	Th.	
25	F.	*D. of Glo. bo.* Cath. In 15
26	Sa.	[days of S. Mart. 4 ret.
27	*Su.*	*Advent Sunday.*
28	M.	
29	Tu.	[*Wales born* 1719.
30	W.	*St. Andrew. Prs. Dow. of*

Phases of the Moon.

	D. H. M.
New Moon —	3. 14. 51
First Quarter —	10. 7. 7
Full Moon —	17. 18. 16
Last Quarter —	25. 22. 58

Other Phenomena.

D.
1. ☾ ☌ ♍ 3h. 7′.
☾ ☌ ♍ 17h. 21′.
5. ☾ ☌ Serpentar. 5h. 55′.
7. ☿ ☌ ♏ diff. Lat. 13′.
9. ♀ ☌ ♍ diff. Lat. 46′.
11. ☾ ☌ ♒ 18h. 1′.
12. ☾ ☍ ♒ 3h. 56′.
16. ♀ ☌ ♎ diff. Lat. 37′.
17. ☿ ☌ Ophiu. diff. Lat. 36′.
18. ☾ ☌ ♉ Im. 5h. 51′. * ½′ S. of ☽'s cent. Em. 6h. 48′. * 1′ S. of ☽'s cent.
☾ 1 ad ☌ ♉ 9h. 15′.
☾ 2 ad ☌ ♉ 9h. 45′.
☾ ☌ ♉ Im. 15h. 22′. * ½′ N. of ☽'s cent. Em. 16h. 35′. * 1½′ N. of ☽'s cent.
21. ☉ enters ♐ at 16h. 28′.
24. ☿ Stationary.
25. ☾ ☍ ♌ 20h. 50′.
26. ♀ ☌ ♎ diff. Lat. 46′.
☾ ☌ ♌ 12h. 45′.
☾ ☍ ♋ 20h. 48′.
27. ☾ ☌ ♍ 12h. 47′.
28. ♀ ☌ ♎ diff. Lat. 35′.
☾ ☌ ♍ 3h. 11′.
☾ ☌ ♍ 12h. 59′.
29. ☾ ☌ ♍ 3h. 29′.
30. ♀ ☌ ♏ diff. Lat. 24′.
☾ ☌ ♍ 7h. 49′.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. South.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Tu.	7. 9. 9. 22	14.27. 2,0	14. 33. 46	16. 12,7	0,4
2	W.	7. 10. 9. 34	14.30.58,1	14. 52. 51	16. 13,1	0,4
3	Th.	7. 11. 9. 48	14.34.55,1	15. 11. 41	16. 12,7	1,2
4	F.	7. 12. 10. 4	14.38.52,9	15. 30. 17	16. 11,5	2,0
5	Sa.	7. 13. 10. 22	14.42.51,5	15. 48. 37	16. 9,5	2,9
6	*Su.*	7. 14. 10. 41	14.46.50,9	16. 6. 41	16. 6,6	3,8
7	M.	7. 15. 11. 2	14.50.51,2	16. 24. 29	16. 2,8	4,5
8	Tu.	7. 16. 11. 25	14.54.52,3	16. 42. 0	15. 58,3	5,4
9	W.	7. 17. 11. 49	14.58.54,3	16. 59. 14	15. 52,9	6,1
10	Th.	7. 18. 12. 14	15. 2.57,0	17. 16. 11	15. 46,8	7,0
11	F.	7. 19. 12. 40	15. 7. 0,6	17. 32. 49	15. 39,8	7,9
12	Sa.	7. 20. 13. 8	15.11. 5,0	17. 49. 10	15. 31,9	8,6
13	*Su.*	7. 21. 13. 37	15.15.10,2	18. 5. 12	15. 23,3	9,5
14	M.	7. 22. 14. 8	15.19.16,3	18. 20. 54	15. 13,8	10,3
15	Tu.	7. 23. 14. 40	15.23.23,2	18. 36. 17	15. 3,5	11,2
16	W.	7. 24. 15. 13	15.27.30,9	18. 51. 22	14. 52,3	11,9
17	Th.	7. 25. 15. 47	15.31.39,3	19. 6. 4	14. 40,4	12,8
18	F.	7. 26. 16. 23	15.35.48,8	19. 20. 26	14. 27,6	13,6
19	Sa.	7. 27. 17. 0	15.39.59,0	19. 34. 28	14. 14,0	14,5
20	*Su.*	7. 28. 17. 39	15.44.10,1	19. 48. 8	13. 59,5	15,2
21	M.	7. 29. 18. 20	15.48.21,9	20. 1. 27	13. 44,3	16,1
22	Tu.	8. 0. 19. 2	15.52.34,6	20. 14. 24	13. 28,2	16,8
23	W.	8. 1. 19. 45	15.56.48,0	20. 26. 58	13. 11,4	17,6
24	Th.	8. 2. 20. 31	16. 1. 2,3	20. 39. 10	12. 53,8	18,4
25	F.	8. 3. 21. 18	16. 5.17,3	20. 50. 59	12. 35,4	19,3
26	Sa.	8. 4. 22. 6	16. 9.33,1	21. 2. 24	12. 16,1	19,9
27	*Su.*	8. 5. 22. 56	16.13.49,7	21. 13. 26	11. 56,2	20,7
28	M.	8. 6. 23. 48	16.18. 7,0	21. 24. 3	11. 35,5	21,4
29	Tu.	8. 7. 24. 42	16.22.25,0	21. 34. 17	11. 14,1	22,1
30	W.	8. 8. 25. 36	16.26.43,7	21. 44. 5	10. 52,0	

Days.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Distance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 11, 1	1. 6, 9	2. 30, 4	9. 996245	5. 9. 58
7	16. 12, 6	1. 7, 6	2. 30, 8	9. 995607	5. 9. 39
13	16. 13, 9	1. 8, 3	2. 31, 3	9. 994996	5. 9. 20
19	16. 15, 1	1. 9, 0	2. 31, 7	9. 994449	5. 9. 1
25	16. 16, 2	1. 9, 6	2. 32, 0	9. 993986	5. 8. 42

Eclipses of the SATELLITES of JUPITER.

I. Satellite. Immerſion.		II. Satellite. Immerſion.		III. Satellite. Emerſions.	
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.
2	17*55. 23	1	1. 47. 44	3	3. 17. 45
	Emerſions.		Emerſions.	10	7*18. 17
4	14*31. 42	4	17*24. 3	17	11*18. 10
6	9* 0. 13	8	6*42. 52	24	15*17. 32
8	3. 28. 43	11	20. 1. 34	IV. Satellite. Conj.	
9	21. 57. 13	15	9*20. 4		
11	16*25. 41	18	22. 38. 24	4	6*24 Inf.
13	10*54. 4	22	11*56. 35	12	16*17 Sup.
15	5*22. 25	26	1. 14. 39	21	0. 34 Inf.
16	23. 50. 44	29	14*32. 32	29	10*28 Sup.
18	18. 19. 2				
20	12*47. 18				
22	7*15. 29				
24	1. 43. 41				
25	20. 11. 51				
27	14*40. 0				
29	9* 8. 6				

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſ. over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Greateſt Elong. 14d.						
1	9. 11. 57	5. 49 S	7. 27. 39	2. 5 S	21. 41 S	1. 12
7	10. 0. 24	6. 44	8. 5. 50	2. 28	23. 44	1. 23
13	10. 21. 13	6. 57	8. 13. 14	2. 37	25. 0	1. 31
19	11. 15. 36	6. 4	8. 19. 2	2. 22	25. 22	1. 31
25	0. 14. 48	3. 37	8. 21. 31	1. 30	24. 41	1. 17
VENUS.						
1	6. 6. 15	3. 16 N	6. 22. 55	1. 27 N	7. 34 S	23. 1
7	6. 9. 56	3. 4	7. 0. 26	1. 21	10. 22	23. 5
13	6. 19. 37	2. 47	7. 7. 58	1. 13	13. 1	23. 10
19	6. 29. 16	2. 25	7. 15. 30	1. 3	15. 29	23. 14
25	7. 8. 53	1. 59	7. 23. 2	0. 51	17. 43	23. 19
MARS. □ 23d. 6h.						
1	3. 14. 6	1. 32 N	4. 21. 8	1. 39 N	16. 2 N	19. 8
7	3. 16. 53	1. 35	4. 24. 8	1. 46	15. 10	18. 56
13	3. 19. 40	1. 38	4. 27. 0	1. 54	14. 18	18. 43
19	3. 22. 25	1. 40	4. 29. 45	2. 2	13. 28	18. 28
25	3. 25. 9	1. 42	5. 2. 21	2. 10	12. 40	18. 13
JUPITER. ☍ 2d. 21h.						
1	1. 10. 52	1. 7 S	1. 11. 17	1. 24 S	13. 54 N	12. 8
7	1. 11. 25	1. 7	1. 10. 28	1. 23	13. 40	11. 41
13	1. 11. 57	1. 6	1. 9. 40	1. 22	13. 26	11. 14
19	1. 12. 30	1. 6	1. 8. 55	1. 21	13. 12	10. 46
25	1. 13. 2	1. 5	1. 8. 13	1. 20	13. 0	10. 18
SATURN.						
1	6. 0. 43	2. 20 N	6. 4. 8	2. 10 N	0. 21 N	21. 48
7	6. 0. 55	2. 21	6. 4. 47	2. 11	0. 6 N	21. 27
13	6. 1. 7	2. 21	6. 5. 23	2. 12	0. 7 S	21. 5
19	6. 1. 19	2. 21	6. 5. 58	2. 13	0. 20	20. 42
25	6. 1. 31	2. 21	6. 6. 30	2. 14	0. 32	20. 19

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Tu.	6. 5. 16. 33	6. 12. 2. 2	2. 3. 10 N	2. 35. 17 N
2	W.	6. 18. 53. 47	6. 25. 51. 44	3. 5. 34	3. 33. 31
3	Th.	7. 2. 55. 24	7. 10. 4. 22	3. 58. 32	4. 20. 9
4	F.	7. 17. 17. 45	7. 24. 34. 48	4. 37. 49	4. 51. 4
5	Sa.	8. 1. 54. 33	8. 9. 16. 1	4. 59. 39	5. 3. 17
6	*Su.*	8. 16. 38. 9	8. 24. 0. 1	5. 1. 54	4. 55. 30
7	M.	9. 1. 20. 35	9. 8. 39. 13	4. 44. 15	4. 28. 21
8	Tu.	9. 15. 55. 2	9. 23. 7. 42	4. 8. 12	3. 44. 14
9	W.	10. 0. 16. 43	10. 7. 21. 52	3. 16. 53	2. 46. 47
10	Th.	10. 14. 23. 1	10. 21. 20. 11	2. 14. 22	1. 40. 15
11	F.	10. 28. 13. 17	11. 5. 2. 35	1. 5. 2 N	0. 29. 10 N
12	Sa.	11. 11. 48. 4	11. 18. 30. 7	0. 6. 46 S	0. 42. 15 S
13	*Su.*	11. 25. 8. 45	0. 1. 44. 14	1. 16. 49	1. 50. 4
14	M.	0. 8. 16. 40	0. 14. 46. 14	2. 21. 32	2. 50. 54
15	Tu.	0. 21. 13. 2	0. 27. 37. 9	3. 17. 49	3. 42. 0
16	W.	1. 3. 58. 38	1. 10. 17. 36	4. 3. 12	4. 21. 14
17	Th.	1. 16. 33. 56	1. 22. 47. 45	4. 35. 57	4. 47. 12
18	F.	1. 28. 59. 5	2. 5. 7. 57	4. 55. 1	4. 59. 17
19	Sa.	2. 11. 14. 21	2. 17. 18. 27	5. 0. 0	4. 57. 27
20	*Su.*	2. 23. 20. 23	2. 29. 20. 11	4. 51. 29	4. 42. 19
21	M.	3. 5. 18. 18	3. 11. 14. 54	4. 30. 4	4. 14. 56
22	Tu.	3. 17. 10. 14	3. 23. 4. 56	3. 57. 0	3. 36. 37
23	W.	3. 28. 59. 14	4. 4. 53. 46	3. 13. 52	2. 49. 0
24	Th.	4. 10. 49. 8	4. 16. 45. 50	2. 22. 11	1. 53. 46
25	F.	4. 22. 44. 37	4. 28. 46. 4	1. 23. 52	0. 52. 49 S
26	Sa.	5. 4. 50. 52	5. 10. 59. 50	0. 20. 52 S	0. 11. 40 N
27	*Su.*	5. 17. 13. 32	5. 23. 32. 35	0. 44. 30 N	1. 17. 14
28	M.	5. 29. 57. 40	6. 6. 29. 19	1. 49. 31	2. 20. 51
29	Tu.	6. 13. 7. 56	6. 19. 53. 50	2. 50. 52	3. 18. 58
30	W.	6. 26. 47. 10	7. 3. 47. 56	3. 44. 42	4. 7. 29

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Tu.	28	22. 41	185. 39	192. 5	0. 13 S	2. 23 S
2	W.	29	23. 32	198. 37	205. 17	4. 33	6. 41
3	Th.	1	♂	212. 5	219. 3	8. 46	10. 44
4	F.	2	0. 27	226. 10	233. 26	12. 34	14. 14
5	Sa.	3	1. 24	240. 51	248. 23	15. 40	16. 52
6	*Su.*	4	2. 23	256. 1	263. 42	17. 47	18. 24
7	M.	5	3. 23	271. 25	279. 7	18. 43	18. 43
8	Tu.	6	4. 22	286. 45	294. 19	18. 24	17. 48
9	W.	7	5. 20	301. 45	309. 2	16. 54	15. 45
10	Th.	8	6. 15	316. 11	323. 10	14. 23	12. 49
11	F.	9	7. 8	330. 0	336. 42	11. 5	9. 13
12	Sa.	10	7. 58	343. 16	349. 42	7. 15	5. 12
13	*Su.*	11	8. 46	356. 3	2. 19	3. 6 S	0. 59 S
14	M.	12	9. 33	8. 32	14. 42	1. 7 N	3. 12 N
15	Tu.	13	10. 19	20. 51	26. 59	5. 14	7. 11
16	W.	14	11. 6	33. 7	39. 16	9. 2	10. 47
17	Th.	15	11. 53	45. 26	51. 38	12. 24	13. 51
18	F.	16	12. 40	57. 52	64. 8	15. 9	16. 16
19	Sa.	17	13. 28	70. 24	76. 42	17. 11	17. 55
20	*Su.*	18	14. 15	83. 0	89. 18	18. 27	18. 46
21	M.	19	15. 3	95. 35	101. 51	18. 52	18. 45
22	Tu.	20	15. 50	108. 5	114. 17	18. 27	17. 56
23	W.	21	16. 36	120. 26	126. 32	17. 13	16. 20
24	Th.	22	17. 21	132. 36	138. 38	15. 15	14. 1
25	F.	23	18. 6	144. 38	150. 36	12. 37	11. 5
26	Sa.	24	18. 51	156. 34	162. 32	9. 25	7. 38
27	*Su.*	25	19. 37	168. 32	174. 35	5. 44	3. 45 N
28	M.	26	20. 23	180. 42	186. 53	1. 41 N	0. 25 S
29	Tu.	27	21. 13	193. 11	199. 37	2. 34 S	4. 43
30	W.	28	22. 4	206. 13	212. 58	6. 51	8. 55

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Midn.
		M. S.	M. S.	M. S.	M. S.		
1	Tu.	15. 44	15. 50	57. 45	58. 9	4937	4907
2	W.	15. 57	16. 3	58. 33	58. 55	4877	4850
3	Th.	16. 9	16. 14	59. 16	59. 34	4824	4802
4	F.	16. 18	16. 22	59. 50	60. 3	4783	4768
5	Sa.	16. 24	16. 26	60. 12	60. 18	4757	4750
6	*Su.*	16. 26	16. 26	60. 20	60. 20	4747	4747
7	M.	16. 25	16. 23	60. 16	60. 9	4752	4760
8	Tu.	16. 21	16. 18	60. 1	59. 50	4770	4783
9	W.	16. 15	16. 11	59. 37	59. 23	4799	4816
10	Th.	16. 7	16. 3	59. 8	58. 53	4834	4853
11	F.	15. 58	15. 54	58. 37	58. 20	4872	4893
12	Sa.	15. 49	15. 45	58. 4	57. 47	4913	4934
13	*Su.*	15. 40	15. 36	57. 31	57. 15	4955	4975
14	M.	15. 32	15. 28	56. 59	56. 44	4995	5014
15	Tu.	15. 23	15. 19	56. 28	56. 14	5035	5053
16	W.	15. 15	15. 12	55. 59	55. 45	5072	5090
17	Th.	15. 8	15. 4	55. 32	55. 19	5107	5124
18	F.	15. 1	14. 58	55. 7	54. 56	5140	5154
19	Sa.	14. 55	14. 53	54. 46	54. 37	5167	5179
20	*Su.*	14. 51	14. 49	54. 29	54. 23	5190	5198
21	M.	14. 48	14. 47	54. 18	54. 15	5205	5209
22	Tu.	14. 46	14. 47	54. 13	54. 14	5211	5210
23	W.	14. 48	14. 49	54. 17	54. 22	5206	5199
24	Th.	14. 51	14. 54	54. 29	54. 39	5190	5177
25	F.	14. 57	15. 1	54. 51	55. 6	5161	5141
26	Sa.	15. 5	15. 11	55. 23	55. 43	5119	5093
27	*Su.*	15. 16	15. 23	56. 4	56. 28	5065	5035
28	M.	15. 30	15. 37	56. 53	57. 20	5003	4968
29	Tu.	15. 45	15. 53	57. 48	58. 16	4933	4898
30	W.	16. 0	16. 8	58. 44	59. 11	4864	4831

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
5	β Capricorni.	58. 45. 53	56. 56. 5	55. 6. 13	53. 16. 17
6		44. 6. 5	42. 16. 2	40. 26. 1	38. 36. 3
7		29. 27. 25			
7	α Pegaſi.	78. 4. 28	76. 21. 59	74. 39. 43	72. 57. 42
8		64. 32. 17	62. 52. 15	61. 12. 41	59. 33. 36
9		51. 26. 20	49. 50. 49	48. 16. 5	46. 42. 10
10		39. 7. 42	37. 40. 29	36. 14. 47	34. 50. 46
11	α Arietis.	66. 28. 34	64. 49. 13	63. 10. 13	61. 31. 33
12		53. 23. 48	51. 47. 25	50. 11. 28	48. 35. 57
13		40. 46. 14			
13	Aldebaran.	71. 27. 56	69. 48. 26	68. 9. 8	66. 30. 4
14		58. 17. 48	56. 39. 57	55. 2. 17	53. 24. 49
15		45. 20. 25	43. 44. 4	42. 7. 56	40. 32. 0
16		32. 35. 5	31. 0. 14	29. 25. 34	27. 51. 4
17		20. 1. 23	18. 27. 59	16. 54. 45	15. 21. 42
18	Pollux.	52. 20. 6	50. 50. 29	49. 21. 9	47. 52. 5
19		40. 31. 16	39. 4. 7	37. 37. 22	36. 11. 0
20	Regulus.	63. 30. 29	62. 0. 42	60. 31. 1	59. 1. 27
21		51. 35. 1	50. 5. 59	48. 37. 2	47. 8. 10
22		39. 44. 45	38. 16. 10	36. 47. 37	35. 19. 5
23		27. 56. 40	26. 28. 9	24. 59. 37	23. 31. 3
24		16. 7. 36			
24	Spica ♍	69. 49. 9	68. 20. 23	66. 51. 31	65. 22. 32
25		57. 55. 39	56. 25. 50	54. 55. 51	53. 25. 41
26		45. 52. 3			
23	The Sun.		120. 56. 28	119. 35. 48	118. 15. 4
24		111. 30. 13	110. 8. 58	108. 47. 37	107. 26. 8
25		100. 36. 29	99. 14. 3	97. 51. 26	96. 28. 37
26		89. 31. 14	88. 7. 0	86. 42. 30	85. 17. 44
27		78. 9. 28	76. 42. 53	75. 15. 57	73. 48. 41
28		66. 26. 54	64. 57. 25	63. 27. 32	61. 57. 15
29		54. 19. 49	52. 47. 6	51. 13. 58	49. 40. 27
30		41. 46. 41	40. 10. 45	38. 34. 27	

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
5	β Capri-	51. 26. 17	49. 36. 15	47. 46. 12	45. 56. 8
6	corni.	36. 46. 8	34. 56. 18	33. 6. 33	31. 16. 56
7		71. 15. 58	69. 34. 31	67. 53. 25	66. 12. 41
8	α Pegaſi.	57. 54. 59	56. 16. 55	54. 39. 26	53. 2. 33
9		45. 9. 9	43. 37. 6	42. 6. 7	40. 36. 17
10		33. 28. 34			
10		73. 8. 56	71. 28. 25	69. 48. 10	68. 8. 13
11	α Arietis.	59. 53. 14	58. 15. 18	56. 37. 44	55. 0. 34
12		47. 0. 54	45. 26. 21	43. 52. 22	42. 18. 59
13		64. 51. 12	63. 12. 33	61. 34. 6	59. 55. 51
14	Aldeba-	51. 47. 33	50. 10. 28	48. 33. 35	46. 56. 53
15	ran.	38. 56. 15	37. 20. 41	35. 45. 18	34. 10. 6
16		26. 16. 46	24. 42. 39	23. 8. 43	21. 34. 58
17		13. 48. 49			
17		58. 21. 0	56. 50. 25	55. 20. 5	53. 49. 55
18	Pollux.	46. 23. 18	44. 54. 48	43. 26. 37	41. 58. 47
19		34. 45. 2			
19		69. 30. 59	68. 0. 39	66. 30. 27	65. 0. 24
20		57. 32. 0	56. 2. 37	54. 33. 20	53. 4. 8
21	Regulus.	45. 39. 22	44. 10. 39	42. 41. 58	41. 13. 20
22		33. 50. 35	32. 22. 6	30. 53. 38	29. 25. 9
23		22. 2. 27	20. 33. 49	19. 5. 7	17. 36. 23
24	Spica ♍	63. 53. 26	62. 24. 12	60. 54. 50	59. 25. 18
25		51. 55. 21	50. 24. 49	48. 54. 6	47. 23. 11
23		116. 54. 16	115. 33. 23	114. 12. 25	112. 51. 2
24		106. 4. 32	104. 42. 46	103. 20. 50	101. 58. 44
25		95. 5. 36	93. 42. 22	92. 18. 54	90. 55. 11
26	The Sun.	83. 52. 41	82. 27. 20	81. 1. 41	79. 35. 48
27		72. 21. 4	70. 53. 5	69. 24. 44	67. 56. 6
28		60. 26. 35	58. 55. 30	57. 24. 1	55. 52. 7
29		48. 6. 30	46. 32. 8	44. 57. 23	43. 22. 14

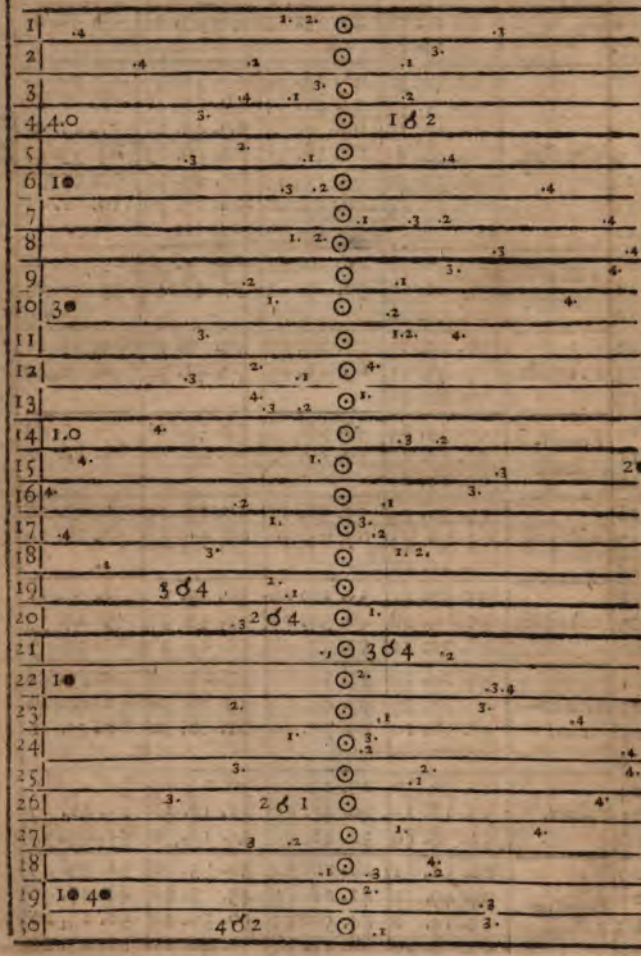
Diſtances of ☽'s Center from Stars, and from ☉ weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Regulus.	38. 35. 58	40. 16. 53	41. 58. 12	43. 39. 53
2		52. 13. 59	53. 57. 55	55. 42. 12	57. 26. 52
7	The Sun.	46. 20. 49	48. 2. 14	49. 43. 33	51. 24. 47
8		59. 48. 51	61. 29. 13	63. 9. 24	64. 49. 25
9		73. 6. 37	74. 45. 26	76. 24. 2	78. 2. 25
10		86. 10. 57	87. 47. 59	89. 24. 47	91. 1. 20
11		99. 0. 31	100. 35. 39	102. 10. 34	103. 45. 14
12		111. 34. 56	113. 8. 12	114. 41. 14	116. 14. 2
10	β Capricorni.	13. 39. 58	15. 24. 26	17. 8. 47	18. 52. 55
11		27. 30. 36	29. 13. 32	30. 56. 14	32. 38. 44
12		41. 7. 44	42. 48. 53	44. 29. 49	46. 10. 33
13	α Aquilæ.	61. 59. 41	63. 26. 22	64. 53. 13	66. 20. 11
14		73. 36. 2	75. 3. 16	76. 30. 27	77. 57. 36
15	Fomalhaut.	52. 12. 36	53. 37. 47	55. 3. 13	56. 28. 52
16		63. 39. 25	65. 5. 49	66. 32. 16	67. 58. 44
17	α Pegaſi.	60. 15. 14	61. 41. 3	63. 6. 54	64. 32. 48
18		71. 42. 22	73. 8. 12	74. 33. 59	75. 59. 42
19		39. 31. 8	40. 55. 22	42. 19. 51	43. 44. 33
20	ε Arietis.	50. 50. 14	52. 15. 38	53. 41. 6	55. 6. 37
21		62. 14. 47			
21	Aldebaran.	28. 33. 44	30. 2. 48	31. 31. 48	33. 0. 43
22		40. 24. 27	41. 53. 5	43. 21. 42	44. 50. 19
23		52. 13. 17	53. 41. 56	55. 10. 37	56. 39. 22
24		64. 4. 10	65. 33. 24	67. 2. 43	68. 32. 10
25	Pollux.	33. 32. 54	34. 58. 28	36. 24. 34	37. 51. 8
26		45. 10. 44	46. 39. 56	48. 9. 32	49. 39. 33
27		57. 15. 36			
27	Regulus.	20. 31. 27	22. 5. 46	23. 40. 28	25. 15. 33
28		33. 16. 47	34. 54. 13	36. 32. 5	38. 10. 21
29		46. 28. 5	48. 8. 56	49. 50. 13	51. 31. 57
30		60. 7. 17	61. 51. 41	63. 36. 31	65. 21. 48
D. 1		74. 14. 33			

Diſtances of ☽'s Center from Stars, and from ☉ weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Regulus.	45. 21. 58	47. 4. 25	48. 47. 14	50. 30. 25
2		59. 11. 53			
6	The Sun.	39. 34. 38	41. 16. 14	42. 57. 48	44. 39. 20
7		53. 5. 54	54. 46. 51	56. 27. 40	58. 8. 20
8		66. 29. 16	68. 8. 54	69. 48. 21	71. 27. 35
9		79. 40. 35	81. 18. 31	82. 56. 13	84. 33. 42
10		92. 37. 40	94. 13. 44	95. 49. 34	97. 25. 10
11		105. 19. 40	106. 53. 50	108. 27. 46	110. 1. 28
12		117. 46. 37	119. 18. 57	120. 51. 4	
10	β Capricorni.	20. 36. 51	22. 20. 35	24. 4. 8	25. 47. 26
11		34. 21. 0	36. 3. 1	37. 44. 48	39. 26. 23
12		47. 51. 6			
12	ε Aquilæ.	56. 15. 17	57. 40. 59	59. 6. 58	60. 33. 13
13		67. 47. 15	69. 14. 23	70. 41. 34	72. 8. 47
14		79. 24. 43			
14	Fomalhaut.	46. 35. 24	47. 59. 5	49. 23. 12	50. 47. 43
15		57. 54. 43	59. 20. 43	60. 46. 50	62. 13. 4
16		69. 25. 12			
16	α Pegasi.	54. 32. 54	55. 58. 18	57. 23. 49	58. 49. 28
17		65. 58. 44	67. 24. 40	68. 50. 35	70. 16. 29
18		77. 25. 20			
18	α Arietis.	33. 57. 42	35. 20. 26	36. 43. 37	38. 7. 12
19		45. 9. 26	46. 34. 28	47. 59. 37	49. 24. 53
20		56. 32. 11	57. 57. 48	59. 23. 26	60. 49. 6
21	Aldebaran.	34. 29. 34	35. 58. 21	37. 27. 5	38. 55. 48
22		46. 18. 54	47. 47. 29	49. 16. 4	50. 44. 40
23		58. 8. 10	59. 37. 3	61. 6. 0	62. 35. 2
24		70. 1. 44			
24	Pollux.	27. 56. 36	29. 19. 41	30. 43. 27	32. 7. 52
25		39. 18. 11	40. 45. 40	42. 13. 36	43. 41. 57
26		51. 9. 59	52. 40. 48	54. 12. 1	55. 43. 37
27	Regulus.	26. 51. 1	28. 26. 52	30. 3. 6	31. 39. 45
28		39. 49. 2	41. 28. 9	43. 7. 42	44. 47. 40
29		53. 14. 8	54. 56. 45	56. 39. 49	58. 23. 20
30		67. 7. 30	68. 53. 38	70. 40. 11	72. 27. 10

Configurations of the SATELLITES of JUPITER at 7 o' th' Clock in the Evening.



Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Th.	
2	F.	
3	Sa.	
4	*Su.*	*2d Sunday in Advent.*
5	M.	
6	Tu.	Nicholas.
7	W.	
8	Th.	Concept. of V. Mary.
9	F.	
10	Sa.	
11	*Su.*	*3d Sunday in Advent.*
12	M.	
13	Tu.	Lucy.
14	W.	
15	Th.	[ends.
16	F.	O Sapientia. Camb. T.
17	Sa.	Oxf. Term ends.
18	*Su.*	*4th Sunday in Advent.*
19	M.	
20	Tu.	
21	W.	*St. Thomas.*
22	Th.	
23	F.	
24	Sa.	
25	*Su.*	*Chriſtmas-Day.*
26	M.	*St. Stephen.*
27	Tu.	*St. John.*
28	W.	*Innocents.*
29	Th.	
30	F.	
31	Sa.	Silveſter.

Phaſes of the Moon.

	D.	H.	M.
New Moon —	3.	1.	44
Firſt Quarter —	9.	17.	5
Full Moon —	17.	12.	16
Laſt Quarter —	25.	16.	43

Other Phenomena.

D.

1. ♄ ☌ ♏ diff. Lat. 33′.
   ☾ ☌ ♎ 18ʰ. 14′.
   ☾ ☍ ♎ 21ʰ. 53′.
7. ♂ ☿ ☿ diff. Lat. 1°. 55′.
8. ☊ ♒ 23ʰ. 41′.
9. ☾ ✶ ♒ Im. 10ʰ. 28′.
   * 5 ♆ N. of ☽'s cent.
   Em. 11ʰ. 23′. * 6½′ N.
15. ☿ Stationary.
   ☾ ☌ ♉ Im. 14ʰ. 29½′.
   * 14½′ S. of ☽'s cent.
   Em. 14ʰ. 46½′. * 14½′ S.
   ☾ 2 ad ☌ ♉ 16ʰ. 1′.
   ☿ B Ophi. diff. Lat. 59′.
   ☾ ☍ ♉ 21ʰ. 17′.
21. ☉ enters ♑ at 4ʰ. 50′.
23. ☾ ☌ ♌ 3ʰ. 42′.
   ☾ ☍ ♌ 19ʰ. 52′.
24. ☾ ☌ ♌ 4ʰ. 5′.
   ☾ ☌ ♏ 20ʰ. 27′.
25. ☾ ☍ ♏ 11ʰ. 14′.
   ☾ ☌ ♏ 21ʰ. 19′.
26. ☾ ☌ ♄ 0ʰ. 1′.
27. ☾ ☍ ♏ 17ʰ. 30′.
29. ☾ ☌ ♎ 4ʰ. 51′.
   ☾ ☍ ♎ 8ʰ. 35′.
   ☾ ☌ ♎ 13ʰ. 36′.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. South.	Equat. of Time. Sub.	Diff.
		S. D. M. S.	H. M. S.	D. M. S.	M. S.	S.
1	Th.	8. 9. 26. 32	16.31. 3,1	21. 53. 29	10. 29,1	23,4
2	F.	8. 10. 27. 30	16.35.23,2	22. 2. 27	10, 5,7	24,0
3	Sa.	8. 11. 28. 28	16.39.43,8	22. 11. 0	9,41,7	24,6
4	*Su.*	8. 12. 29. 27	16.44. 5,1	22. 19. 7	9,17,1	25,2
5	M.	8. 13. 30. 28	16.48.26,9	22. 26. 48	8. 51,9	25,7
6	Tu.	8. 14. 31. 29	16.52.49,2	22. 34. 3	8. 26,2	26,2
7	W.	8. 15. 32. 30	16.57.12,0	22. 40. 50	8. 0,0	26,6
8	Th.	8. 16. 33. 33	17. 1.35,3	22. 47. 12	7. 33,4	27,1
9	F.	8. 17. 34. 36	17. 5.59,1	22. 53. 6	7. 6,3	27,5
10	Sa.	8. 18. 35. 39	17.10.23,1	22. 58. 33	6. 38,8	27,9
11	*Su.*	8. 19. 36. 43	17.14.47,7	23. 3. 33	6. 10,9	28,2
12	M.	8. 20. 37. 47	17.19.12,5	23. 8. 5	5. 42,7	28,6
13	Tu.	8. 21. 38. 51	17.23.37,6	23. 12. 9	5. 14,1	28,8
14	W.	8. 22. 39. 56	17.28. 3,0	23. 15. 46	4. 45,3	29,0
15	Th.	8. 23. 41. 1	17.32.28,7	23. 18. 55	4. 16,3	29,2
16	F.	8. 24. 42. 7	17.36.54,6	23. 21. 36	3. 47,1	29,4
17	Sa.	8. 25. 43. 13	17.41.20,7	23. 23. 48	3. 17,7	29,6
18	*Su.*	8. 26. 44. 19	17.45.46,9	23. 25. 33	2. 48,1	29,7
19	M.	8. 27. 45. 26	17.50.13,3	23. 26. 49	2. 18,4	29,9
20	Tu.	8. 28. 46. 33	17.54.39,8	23. 27. 38	1. 48,5	30,0
21	W.	8. 29. 47. 42	17.59. 6,4	23. 27. 57	1. 18,5	30,0
22	Th.	9. 0. 48. 51	18. 3.33,0	23. 27. 49	0. 48,5	30,0
23	F.	9. 1. 50. 0	18. 7.59,7	23. 27. 12	0. 18,5	30,0
24	Sa.	9. 2. 51. 10	18.12.26,3	23. 26. 7	Ad:11,5	29,9
25	*Su.*	9. 3. 52. 20	18.16.52,9	23. 24. 34	0. 41,4	29,9
26	M.	9. 4. 53. 31	18.21.19,4	23. 22. 32	1. 11,3	29,8
27	Tu.	9. 5. 54. 43	18.25.45,7	23. 20. 2	1. 41,1	29,6
28	W.	9. 6. 55. 54	18.30.11,9	23. 17. 4	2, 10,7	29,3
29	Th.	9. 7. 57. 7	18.34.38,0	23. 13. 38	2, 40,0	29,2
30	F.	9. 8. 58. 19	18.39. 3,8	23. 9. 44	3, 9,2	29,0
31	Sa.	9. 9. 59. 32	18.43.29,4	23. 5. 22	3. 38,2	

Days.	Semidiameter of the Sun.	Time of D° passing the Meridian.	Hourly Motion of the Sun.	Logaritim of the Sun's Diftance.	Place of the Moon's Node.
	M. S.	M. S.	M. S.		S. D. M.
1	16. 17,1	1. 10,2	2. 32,2	9. 993592	5. 8. 22
7	16. 17,9	1. 10,7	2. 32,5	9. 993248	5. 8. 3
13	16. 18,5	1. 11,0	2. 32,7	9. 992959	5. 7. 44
19	16. 19,0	1. 11,1	2. 32,8	9. 992765	5. 7. 25
25	16. 19,2	1. 11,1	2. 32,9	9. 992671	5. 7. 6

Eclipfes of the SATELLITES of JUPITER.

I. Satellite. Emerfions.		II. Satellite. Emerfions.		III. Satellite.		
Days	H. M. S.	Days	H. M. S.	Days	H. M. S.	
1	3. 36. 13	3	3. 50. 17	1	19. 16. 21	E
2	22. 4. 16	6	17. 7. 56	8	23. 14. 53	E
4	16. 32. 19	10	6*25. 31	16	1. 40. 38	I
6	11* 0. 17	13	19. 43. 2	16	3. 13. 10	E
8	5*28. 19	17	9* 0. 25	23	5*38. 46	I
9	23. 56. 16	20	22. 17. 44	23	7*11. 26	E
11	18. 24. 17	24	11*35. 4	30	9*36. 59	I
13	12*52. 13	28	0. 52. 27	30	11* 9. 45	E
15	7*20. 12	31	14. 9. 46			
17	1. 48. 7			IV. Satellite. Conj.		
18	20. 16. 7					
20	14. 44. 4			7	19. 32	Inf.
22	9*12. 1			16	4. 37	Sup.
24	3. 39. 57			24	13*40	Inf.
25	22. 7. 51					
27	16. 35. 53					
29	11* 3. 52					
31	5*31. 52					

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	S. D. M.	D. M.	S. D. M.	D. M.	D. M.	H. M.
MERCURY. Inf. ☌ 4d. 20½h. Gr. El. 24d.						
1	1. 19. 16	0. 25 N	8. 18. 17	0. 11 N	22. 46 S	0. 38
7	2. 26. 54	4. 36	8. 10. 28	2. 4	20. 0	23. 32
13	4. 3. 3	6. 49	8. 5. 29	2. 53	18. 24	22. 49
19	5. 4. 9	6. 38	8. 6. 34	2. 38	18. 50	22. 29
25	5. 29. 51	5. 2	8. 11. 39	1. 55	20. 19	22. 25
VENUS.						
1	7. 18. 29	1. 30 N	8. 0. 35	0. 39 N	19. 40 S	23. 24
7	7. 28. 3	0. 58	8. 8. 8	0. 25	21. 17	23. 29
13	8. 7. 36	0. 25 N	8. 15. 41	0. 11 N	22. 31	23. 35
19	8. 17. 7	0. 9 S	8. 23. 14	0. 4 S	23. 21	23. 41
25	8. 26. 38	0. 42	9. 0. 48	0. 18	23. 46	23. 48
MARS.						
1	3. 27. 53	1. 44 N	5. 4. 47	2. 19 N	11. 55 N	17. 57
7	4. 0. 35	1. 46	5. 7. 0	2. 28	11. 15	17. 39
13	4. 3. 17	1. 47	5. 9. 1	2. 38	10. 38	17. 21
19	4. 5. 58	1. 48	5. 10. 48	2. 48	10. 7	17. 1
25	4. 8. 38	1. 49	5. 12. 16	2. 58	9. 42	16. 39
JUPITER.						
1	1. 13. 35	1. 5 S	1. 7. 36	1. 18 S	12. 49 N	9. 50
7	1. 14. 7	1. 4	1. 7. 4	1. 17	12. 41	9. 22
13	1. 14. 40	1. 4	1. 6. 39	1. 15	12. 34	8. 54
19	1. 15. 12	1. 4	1. 6. 21	1. 14	12. 30	8. 26
25	1. 15. 45	1. 3	1. 6. 9	1. 12	12. 28	7. 59
SATURN. □ 29d. 15½h.						
1	6. 1. 43	2. 21 N	6. 6. 59	2. 16 N	0. 42 N	19. 55
7	6. 1. 55	2. 22	6. 7. 26	2. 17	0. 51	19. 31
13	6. 2. 7	2. 22	6. 7. 49	2. 18	0. 59	19. 5
19	6. 2. 19	2. 22	6. 8. 9	2. 20	1. 6	18. 40
25	6. 2. 31	2. 22	6. 8. 26	2. 22	1. 11	18. 15

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midn.
		S. D. M. S.	S. D. M. S.	D. M. S.	D. M. S.
1	Th.	7. 10. 55. 55	7. 18. 10. 36	4. 26. 46 N	4. 42. 8 N
2	F.	7. 25. 31. 23	8. 2. 57. 21	4. 53. 1	4. 59. 5
3	Sa.	8. 10. 27. 16	8. 18. 0. 7	5. 0. 4	4. 55. 51
4	*Su.*	8. 25. 34. 25	9. 3. 8. 54	4. 46. 24	4. 31. 55
5	M.	9. 10. 42. 8	9. 18. 13. 0	4. 12. 41	3. 49. 5
6	Tu.	9. 25. 40. 21	10. 3. 3. 21	3. 21. 43	2. 51. 14
7	W.	10. 10. 21. 23	10. 17. 33. 57	2. 18. 10	1. 43. 18
8	Th.	10. 24. 40. 39	11. 1. 41. 37	1. 7. 13 N	0. 30. 33 N
9	F.	11. 8. 36. 47	11. 15. 26. 14	0. 6. 4 S	0. 42. 6 S
10	Sa.	11. 22. 10. 21	11. 28. 49. 21	1. 17. 6	1. 50. 35
11	*Su.*	0. 5. 23. 41	0. 11. 53. 36	2. 22. 9	2. 51. 33
12	M.	0. 18. 19. 34	0. 24. 41. 55	3. 18. 23	3. 42. 29
13	Tu.	1. 1. 0. 57	1. 7. 16. 59	4. 3. 35	4. 21. 34
14	W.	1. 13. 30. 22	1. 19. 41. 17	4. 36. 18	4. 47. 39
15	Th.	1. 25. 49. 59	2. 1. 56. 33	4. 55. 3 2	5. 0. 0
16	F.	2. 8. 1. 16	2. 14. 4. 19	5. 0. 59	4. 58. 36
17	Sa.	2. 20. 5. 41	2. 26. 5. 37	4. 52. 49	4. 43. 50
18	*Su.*	3. 2. 4. 5	3. 8. 1. 27	4. 31. 45	4. 16. 42
19	M.	3. 13. 57. 43	3. 19. 53. 5	3. 58. 50	3. 38. 27
20	Tu.	3. 25. 47. 59	4. 1. 42. 26	3. 15. 41	2. 50. 46
21	W.	4. 7. 36. 55	4. 13. 31. 49	2. 24. 0	1. 55. 36
22	Th.	4. 19. 27. 29	4. 25. 24. 28	1. 25. 48	0. 55. 0 S
23	F.	5. 1. 23. 16	5. 7. 24. 30	0. 23. 19 S	0. 8. 51 N
24	Sa.	5. 13. 28. 38	5. 19. 36. 29	0. 41. 10 N	1. 13. 24
25	*Su.*	5. 25. 48. 31	6. 2. 5. 27	1. 45. 7	2. 16. 1
26	M.	6. 8. 27. 53	6. 14. 56. 22	2. 45. 40	3. 13. 40
27	Tu.	6. 21. 31. 28	6. 28. 13. 37	3. 39. 33	4. 2. 56
28	W.	7. 5. 3. 8	7. 12. 0. 16	4. 23. 18	4. 40. 10
29	Th.	7. 19. 4. 52	7. 26. 16. 51	4. 53. 5	5. 1. 37
30	F.	8. 3. 35. 48	8. 11. 1. 8	5. 5. 23	5. 4. 6
31	Sa.	8. 18. 31. 52	8. 26. 6. 55	4. 57. 36	4. 45. 50

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſcen. at Midn.	☽'s Declinat. at Noon.	☽'s Declinat. at Midn.
			H. M.	D. M.	D. M.	D. M.	D. M.
1	Th.	29	22. 59	219. 55	227. 3	10. 54 S	12. 45 S
2	F.	30	23. 59	234. 23	241. 54	14. 25	15. 53
3	Sa.	1	♂	249. 36	257. 25	17. 5	18. 1
4	*Su.*	2	1. 0	265. 21	273. 19	18. 37	18. 54
5	M.	3	2. 2	281. 17	289. 12	18. 50	18. 26
6	Tu.	4	3. 2	297. 0	304. 40	17. 44	16. 43
7	W.	5	4. 0	312. 10	319. 29	15. 27	13. 57
8	Th.	6	4. 55	326. 36	333. 31	12. 15	10. 25
9	F.	7	5. 47	340. 17	346. 52	8. 27	6. 24
10	Sa.	8	6. 36	353. 19	359. 39	4. 17	2. 10 S
11	*Su.*	9	7. 23	5. 53	12. 3	0. 2 S	2. 4 N
12	M.	10	8. 8	18. 10	24. 15	4. 8 N	6. 8
13	Tu.	11	8. 54	30. 18	36. 22	8. 2	9. 50
14	W.	12	9. 40	42. 27	48. 34	11. 31	13. 3
15	Th.	13	10. 26	54. 42	60. 53	14. 27	15. 40
16	F.	14	11. 12	67. 5	73. 20	16. 43	17. 34
17	Sa.	15	12. 0	79. 36	85. 53	18. 14	18. 41
18	*Su.*	16	12. 47	92. 11	98. 28	18. 55	18. 57
19	M.	17	13. 34	104. 44	110. 58	18. 46	18. 23
20	Tu.	18	14. 20	117. 9	123. 18	17. 48	17. 2
21	W.	19	15. 5	129. 23	135. 26	16. 4	14. 56
22	Th.	20	15. 51	141. 25	147. 22	13. 39	12. 12
23	F.	21	16. 35	153. 17	159. 10	10. 38	8. 56
24	Sa.	22	17. 19	165. 3	170. 56	7. 8	5. 15
25	*Su.*	23	18. 3	176. 51	182. 49	3. 17 N	1. 15 N
26	M.	24	18. 49	188. 52	195. 0	0. 49 S	2. 55 S
27	Tu.	25	19. 37	201. 16	207. 40	5. 0	7. 4
28	W.	26	20. 29	214. 15	221. 1	9. 5	11. 0
29	Th.	27	21. 25	227. 59	235. 10	12. 48	14. 27
30	F.	28	22. 25	242. 34	250. 11	15. 54	17. 6
31	Sa.	29	23. 27	257. 59	265. 55	18. 2	18. 39

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Proport. Logar. at Noon.	Proport. Logar. at Mid.
		M. S.	M. S.	M. S.	M. S.		
1	Th.	16. 15	16. 21	59. 37	60. 0	4799	4771
2	F.	16. 26	16. 32	60. 20	60. 39	4747	4724
3	Sa.	16. 35	16. 38	60. 52	61. 2	4709	4697
4	*Su.*	16. 39	16. 39	61. 6	61. 7	4692	4691
5	M.	16. 38	16. 36	61. 3	60. 55	4696	4705
6	Tu.	16. 33	16. 29	60. 43	60. 28	4719	4737
7	W.	16. 24	16. 18	60. 10	59. 50	4759	4783
8	Th.	16. 12	16. 6	59. 28	59. 6	4810	4837
9	F.	16. 0	15. 53	58. 43	58. 19	4865	4895
10	Sa.	15. 47	15. 41	57. 56	57. 33	4923	4952
11	*Su.*	15. 35	15. 29	57. 11	56. 51	4980	5005
12	M.	15. 24	15. 19	56. 31	56. 13	5031	5054
13	Tu.	15. 14	15. 10	55. 55	55. 38	5077	5099
14	W.	15. 6	15. 2	55. 25	55. 12	5116	5133
15	Th.	14. 59	14. 56	55. 0	54. 48	5149	5165
16	F.	14. 53	14. 51	54. 38	54. 30	5178	5189
17	Sa.	14. 49	14. 48	54. 23	54. 17	5198	5206
18	*Su.*	14. 46	14. 45	54. 12	54. 9	5213	5217
19	M.	14. 45	14. 44	54. 6	54. 5	5221	5222
20	Tu.	14. 44	14. 45	54. 6	54. 7	5221	5219
21	W.	14. 46	14. 48	54. 11	54. 18	5214	5205
22	Th.	14. 50	14. 52	54. 25	54. 35	5195	5182
23	F.	14. 55	14. 59	54. 46	55. 0	5167	5149
24	Sa.	15. 4	15. 8	55. 16	55. 34	5128	5104
25	*Su.*	15. 14	15. 20	55. 55	56. 17	5077	5049
26	M.	15. 27	15. 34	56. 41	57. 8	5018	4984
27	Tu.	15. 41	15. 49	57. 35	58. 3	4950	4915
28	W.	15. 57	16. 5	58. 32	59. 1	4878	4843
29	Th.	16. 13	16. 20	59. 29	59. 56	4809	4776
30	F.	16. 26	16. 32	60. 20	60. 42	4747	4721
31	Sa.	16. 37	16. 41	61. 0	61. 15	4699	4682

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
5		69. 25. 11	67. 40. 35	65. 56. 22	64. 12. 33
6	α Pegaſi.	55. 40. 39	54. 0. 1	52. 20. 11	50. 41. 9
7		42. 39. 54			
7		83. 51. 19	82. 5. 43	80. 20. 30	78. 35. 39
8	α Arietis.	69. 57. 21	68. 14. 54	66. 32. 53	64. 51. 19
9		56. 30. 32	54. 51. 53	53. 13. 47	51. 36. 15
10		43. 37. 23			
10		74. 25. 33	72. 45. 0	71. 4. 47	69. 24. 53
11	Aldeba-	61. 10. 0	59. 31. 56	57. 54. 9	56. 16. 38
12	ran.	48. 13. 4	46. 37. 7	45. 1. 25	43. 25. 56
13		35. 31. 59	33. 57. 50	32. 23. 53	30. 50. 8
14		23. 4. 6			
14		67. 26. 21	65. 55. 26	64. 24. 43	62. 54. 12
15	Pollux.	55. 24. 40	53. 55. 24	52. 26. 20	50. 57. 31
16		43. 36. 47	42. 9. 23	40. 42. 17	39. 15. 30
17		32. 7. 1			
17		66. 44. 32	65. 14. 43	63. 45. 0	62. 15. 23
18		54. 48. 31	53. 19. 18	51. 50. 9	50. 21. 3
19	Regulus.	42. 56. 25	41. 27. 38	39. 58. 53	38. 30. 10
20		31. 6. 45	29. 38. 8	28. 9. 31	26. 40. 54
21		19. 17. 49			
21		73. 1. 17	71. 32. 52	70. 4. 26	68. 35. 57
22		61. 12. 48	59. 43. 58	58. 15. 3	56. 46. 3
23	Spica ♍	49. 19. 34	47. 49. 55	46. 20. 9	44. 50. 15
24		37. 18. 57	35. 48. 18	34. 17. 30	32. 46. 32
25		25. 10. 22	23. 38. 51	22. 7. 34	20. 36. 32
26		13. 8. 19			
23		120. 26. 41	119. 4. 16	117. 41. 41	116. 18. 57
24		109. 22. 26	107. 58. 28	106. 34. 14	105. 9. 47
25		98. 3. 35	96. 37. 29	95. 11. 5	93. 44. 22
26	The Sun.	86. 25. 53	84. 57. 8	83. 28. 1	81. 58. 31
27		74. 25. 11	72. 53. 18	71. 20. 59	69. 48. 15
28		61. 58. 8	60. 22. 47	58. 46. 59	57. 10. 45
29		49. 3. 7	47. 24. 18	45. 45. 4	44. 5. 27

Diſtances of ☽'s Center from ☉, and from Stars eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S	D. M. S.
4		76. 26. 13	74. 40. 38	72. 55. 15	71. 10. 5
5	α Pegaſi.	62. 29. 7	60. 46. 8	59. 3. 44	57. 21. 54
6		49. 2. 54	47. 25. 37	45. 49. 18	44. 14. 3
7		76. 51. 11	75. 7. 7	73. 23. 27	71. 40. 12
8	α Arietis	63. 10. 12	61. 29. 32	59. 49. 22	58. 9. 42
9		49. 59. 16	48. 22. 52	46. 47. 6	45. 11. 55
10		67. 45. 18	66. 6. 1	64. 27. 3	62. 48. 22
11	Aldeba-	54. 39. 24	53. 2. 26	51. 25. 43	49. 49. 16
12	ran.	41. 50. 42	40. 15. 42	38. 40. 54	37. 6. 20
13		29. 16. 34	27. 43. 11	26. 9. 59	24. 36. 57
14		61. 23. 53	59. 53. 46	58. 23. 51	56. 54. 9
15	Pollux.	49. 28. 54	48. 0. 30	46. 32. 20	45. 4. 26
16		37. 49. 3	36. 22. 57	34. 57. 14	33. 31. 55
17		60. 45. 52	59. 16. 26	57. 47. 3	56. 17. 45
18	Regulus.	48. 52. 1	47. 23. 3	45. 54. 8	44. 25. 15
19		37. 1. 28	35. 32. 46	34. 4. 5	32. 35. 24
20		25. 12. 18	23. 43. 42	22. 15. 5	20. 46. 27
21		67. 7. 26	65. 38. 52	64. 10. 15	62. 41. 33
22		55. 16. 57	53. 47. 46	52. 18. 29	50. 49. 4
23	Spica ♍	43. 20. 14	41. 50. 7	40. 19. 51	38. 49. 28
24		31. 15. 26	29. 44. 13	28. 12. 58	26. 41. 42
25		19. 5. 44	17. 35. 26	16. 5. 42	14. 36. 37
23		114. 56. 3	113. 32. 58	112. 9. 40	110. 46. 9
24		103. 45. 4	102. 20. 7	100. 54. 53	99. 29. 22
25		92. 17. 21	90. 50. 0	89. 22. 18	87. 54. 16
26	The Sun.	80. 28. 39	78. 58. 23	77. 27. 43	75. 56. 39
27		68. 15. 6	66. 41. 31	65. 7. 30	63. 33. 2
28		55. 34. 4	53. 56. 58	52. 19. 27	50. 41. 30
29		42. 25. 25	40. 45. 0	39. 4. 13	

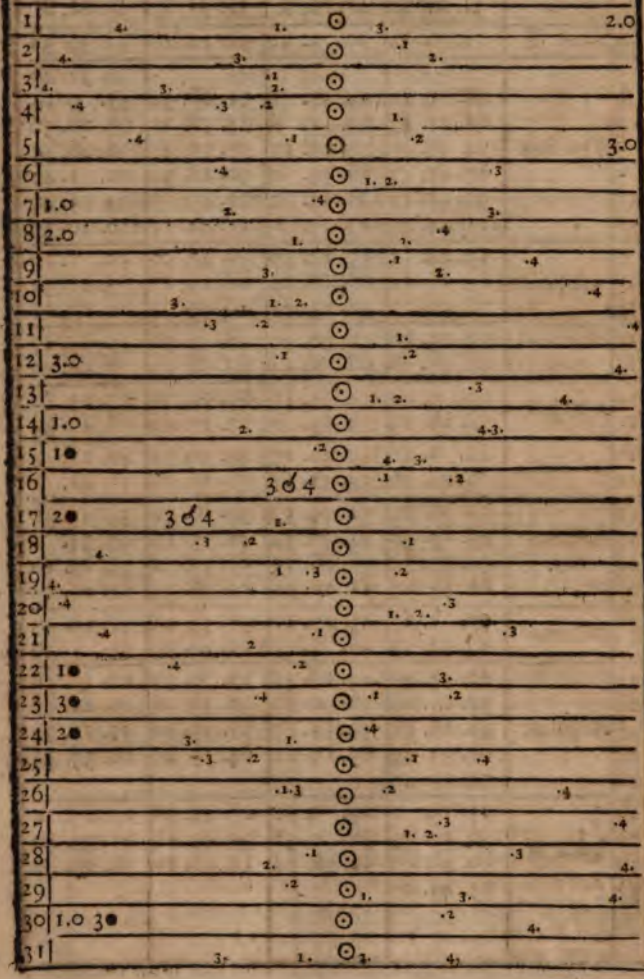
Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon. D. M. S.	3 Hours. D. M. S.	6 Hours. D. M. S.	9 Hours. D. M. S.
1	Spica ♍	21. 13. 59	22. 58. 28	24. 43. 41	26. 29. 37
2		35. 28. 30			
6		41. 15. 39	42. 58. 21	44. 40. 51	46. 23. 8
7		54. 50. 51	56. 31. 31	58. 11. 54	59. 51. 59
8		68. 7. 23	69. 45. 27	71. 23. 11	73. 0. 34
9	The Sun.	81. 2. 12	82. 37. 27	84. 12. 21	85. 46. 54
10		93. 34. 40	95. 7. 12	96. 39. 25	98. 11. 19
11		105. 46. 9	107. 16. 13	108. 45. 59	110. 15. 28
12		117. 38. 47	119. 6. 40	120. 34. 17	
10		59. 33. 48	61. 0. 32	62. 27. 22	63. 54. 18
11	α Aquilæ.	71. 9. 34	72. 36. 32	74. 3. 24	75. 30. 12
12		82. 42. 32			
12		49. 35. 9	50. 59. 26	52. 23. 57	53. 48. 40
13	Fomal-haut.	60. 54. 45	62. 20. 16	63. 45. 50	65. 11. 27
14		72. 19. 35			
14		57. 31. 0	58. 55. 30	60. 20. 5	61. 44. 45
15	α Pegaſi.	68. 48. 49	70. 13. 41	71. 38. 32	73. 3. 23
16		80. 7. 16			
16		36. 34. 45	37. 57. 38	39. 20. 52	40. 44. 23
17	α Arietis.	47. 45. 47	49. 10. 38	50. 35. 37	52. 0. 43
18		59. 7. 28			
18		25. 20. 18	26. 49. 32	28. 18. 42	29. 47. 49
19		37. 12. 38	38. 41. 27	40. 10. 15	41. 39. 1
20	Aldeba-ran.	49. 2. 45	50. 31. 27	52. 0. 9	53. 28. 51
21		60. 52. 39	62. 21. 31	63. 50. 26	65. 19. 24
22		72. 45. 10			
22		30. 22. 56	31. 46. 53	33. 11. 17	34. 36. 8
23	Pollux.	41. 46. 39	43. 13. 51	44. 41. 22	46. 9. 13
24		53. 32. 59			
24		16. 46. 23	18. 18. 7	19. 50. 5	21. 22. 20
25		29. 7. 35	30. 41. 31	32. 15. 46	33. 50. 21
26	Regulus.	41. 48. 12	43. 24. 50	45. 1. 50	46. 39. 13
27		54. 52. 1	56. 31. 49	58. 12. 3	59. 52. 43
28		68. 22. 36	70. 5. 55	71. 49. 42	73. 33. 57
29		29. 11. 12	30. 56. 4	32. 41. 33	34. 27. 39
30	Spica ♍	43. 26. 27	45. 15. 41	47. 5. 22	48. 55. 27
31		58. 11. 44	60. 4. 0	61. 56. 33	63. 49. 22

Distances of ☽'s Center from ☉, and from Stars west of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		D. M. S.	D. M. S.	D. M. S.	D. M. S.
1	Spica ♍	28. 16. 15	30. 3. 31	31. 51. 18	33. 39. 38
5					39. 32. 46
6		48. 5. 12	49. 47. 1	51. 28. 34	53. 9. 51
7		61. 31. 47	63. 11. 8	64. 50. 12	66. 28. 56
8	The Sun.	74. 37. 36	76. 14. 17	77. 50. 37	79. 26. 35
9		87. 21. 7	88. 55. 0	90. 28. 34	92. 1. 47
10		99. 42. 53	101. 14. 9	102. 45. 7	104. 15. 47
11		111. 44. 40	113. 13. 36	114. 42. 15	116. 10. 39
9		53. 49. 1	55. 14. 50	56. 40. 56	58. 7. 16
10	α Aquilæ.	65. 21. 21	66. 48. 25	68. 15. 28	69. 42. 31
11		76. 56. 55	78. 23. 31	79. 50. 1	81. 16. 21
12	Fomal-	55. 13. 36	56. 38. 42	58. 3. 56	59. 29. 17
13	haut.	66. 37. 6	68. 2. 44	69. 28. 23	70. 54. 0
14	α Pegasi.	63. 9. 29	64. 34. 17	65. 59. 6	67. 23. 57
15		74. 28. 13	75. 53. 2	77. 17. 49	78. 42. 33
16		42. 8. 12	43. 32. 17	44. 56. 34	46. 21. 4
17	α Arietis.	53. 25. 56	54. 51. 14	56. 16. 36	57. 42. 1
18		31. 16. 53	32. 45. 53	34. 14. 51	35. 43. 46
19	Aldeba-	43. 7. 46	44. 36. 32	46. 5. 17	47. 34. 1
20	ran.	54. 57. 33	56. 26. 17	57. 55. 2	59. 23. 50
21		66. 48. 25	68. 17. 30	69. 46. 39	71. 15. 52
22	Pollux.	36. 1. 27	37. 27. 11	38. 53. 18	40. 19. 47
23		47. 37. 23	49. 5. 51	50. 34. 36	52. 3. 39
24		22. 54. 49	24. 27. 35	26. 0. 37	27. 33. 58
25		35. 25. 14	37. 0. 27	38. 36. 2	40. 11. 56
26	Regulus.	48. 16. 58	49. 55. 7	51. 33. 40	53. 12. 39
27		61. 33. 49	63. 15. 21	64. 57. 19	66. 39. 44
28		75. 18. 40			
28		22. 19. 2	24. 0. 56	25. 43. 36	27. 27. 2
29	Spica ♍	36. 14. 23	38. 1. 38	39. 49. 24	41. 37. 40
30		50. 45. 59	52. 36. 54	54. 28. 10	56. 19. 46
31		65. 42. 27			

Configurations of the SATELLITES of JUPITER at 7 o'th' Clock in the Evening.



EXPLANATION and USE

OF THE

ARTICLES

Contained in the

ASTRONOMICAL and NAUTICAL EPHEMERIS.

IT may be proper firſt to premiſe, that all the Calculations are made according to apparent Time by the Meridian of the Royal Obſervatory at Greenwich. They are likewiſe adapted to apparent Noon, except where they are otherwiſe diſtinguiſhed, as the Eclipſes and Configurations of Jupiter's Satellites, the Moon's Places, &c, computed for Midnight, and the Diſtances of the Moon from the Sun and Stars for every third Hour; which are all computed to the apparent Times ſet down.

Apparent Time is that deduced immediately from the Sun, whether from the Obſervation of his paſſing the Meridian, from his Altitude obſerved at a Diſtance from the Meridian, or from his obſerved Riſing or Setting. This Time is different from that ſhewn by Clocks and Watches well regulated at Land, which is called equated or mean Time. This will be explained when we come to treat of the Equation of Time.

The Day is here ſuppoſed, according to the Method of Aſtronomers, to begin at Noon, or 12 Hours later than the civil Day of the ſame Denomination, and to be counted up to 24 Hours, or the ſucceeding Noon, when the next Day begins: Thus the Day of the Month and the Hour of the Day are the ſame in this Method as in the civil Account at Noon, and from Noon till Midnight; but from Midnight till Noon they

 differ;

differ; for whereas in the civil Account a freſh Day is ſuppoſed to begin at Midnight, and the Hours to begin over again, in this Method the Day is ſtill continued beyond Midnight, and the Reckoning of the Hours is continued up to 24. Thus the Diſtances put down to January 10, 15 Hours, belong to January 11 at Three in the Morning by civil Reckoning.

There are 12 Pages for every Month. The firſt Column of the firſt Page of each Month contains the Day of the Month; the Second, the Day of the Week expreſſed conciſely by the initial Letter or Letters, *Su.* ſtanding for Sunday, M. for Monday, Tu. for Tueſday, W. for Wedneſday, Th. for Thurſday, F. for Friday, and Sa. for Saturday: The third Column exhibits the Sundays and Feſtivals of the Church of England, and other remarkable Days: The laſt Column ſhews at Top the Moon's Phaſes, or the Times of new and full Moon, and of the firſt and laſt Quarter, or two Quadratures with the Sun: Beneath are contained miſcellaneous Phænomena, namely, Eclipſes of the Sun and Moon, and Occultations of Planets or fixed Stars not leſs than the fourth Magnitude, by the Moon, as they ſhould happen at Greenwich by the Tables; the Conjunctions of the Moon with all Stars not leſs than the fourth Magnitude, which can be Occultations any where on the Globe, between the Latitudes of 60°. North and 40°. South: The Conjunctions, Oppoſitions and Quadratures of the ſuperior Planets with the Sun; and the Conjunctions and greateſt Elongations of the inferior Planets from the Sun, the Entrance of the Sun into the ſeveral Signs, and any other remarkable Phænomena.

The Stars are expreſſed by Bayer's Characters of Reference. The Conjunction of the Moon or a Planet with a Star, is denoted by prefixing the Character of the Moon or Planet to that of the Star, the Time of the Conjunction being placed immediately after. The Caſe is the ſame with Reſpect to the Occultation of a Star or Planet by the Moon, only this is further diſtinguiſhed by the Addition of Im. or Immerſion, to ſignify the Diſappearance behind the Moon; and Em. or Emerſion, to ſignify the Re-appearance of the ſame. Thus 8d ☽ ☍ ν 16h. 22′. ſignifies that the Moon will be in Conjunction with the Star ☍ ν on the Eighth Day at 16h. 22′. excluſive of Parallax: And 10d. ☽ ☌ Ⅱ Imm. 9h. 14′. Em. 10h. 23′ ſignifies that the Moon will eclipſe ε Ⅱ on the 10th Day, the Immerſion being at 9h 14′ and at 10h. 23′. apparent Time at Greenwich.

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The Occultations ſet down are thoſe only viſible at Greenwich; and the Circumſtances will not differ very widely in moſt Parts of the Kingdom; but in very diſtant Places they will differ very much, owing to the Change of the Moon's Parallax, or it may become no Occultation at all: The like may be ſaid of Eclipſes of the Sun.

Eclipſes of the Sun, and Occultations of fixed Stars by the Moon, if obſerved in Places whoſe Latitude and Longitude are well determined, may be applied to the Correction of the lunar Tables; but if made in Places whoſe Latitude only is well known, may be applied to the Determination of the Longitude of the Place; but for this Purpoſe an accurate Calculation muſt be made of the Moon's Parallaxes in Longitude and Latitude, which makes this Method of ſettling the Longitudes of Places, though a very accurate one, leſs convenient in Uſe for Perſons not much verſed in aſtronomical Calculations. However, this ought not to diſcourage Travellers or Mariners from endeavouring to make theſe Obſervations as often and as carefully as poſſible, when they ſhall happen to be at any Place whoſe Longitude they have Reaſon to think has not been at all or but indifferently determined; ſince the neceſſary Calculations may be made at any Time afterwards by themſelves, at leiſure, or referred to the Skill of Aſtronomers and Mathematicians.

Eclipſes of the Moon are not liable to this Inconvenience; the Longitude of any Place, where an Eclipſe has been obſerved, being deduced immediately by taking the Difference of the Time of the Obſervation and that ſet down in the Ephemeris, and converting it into Degrees, at the Rate of 15 to One Hour, &c. or more briefly by Table Pages 6. 7, 8. of the Tables requiſite to be uſed with the Ephemeris. But as the Beginning or Ending of an Eclipſe of the Moon cannot be generally obſerved nearer than One Minute, and ſometimes Two or Three Minutes of Time, the Longitudes of Places cannot be certainly determined by this Method from a ſingle Obſervation of the Beginning or End nearer than a Degree. It is unneceſſary to mention that even this Point of Exactneſs will often be of great Service. If both the Beginning and End of the Eclipſe be obſerved, a conſiderably greater Degree of Exactneſs will be attained.

The Conjunctions of the Moon with the Planets, or fixed Stars not leſs than the fourth Magnitude, which may prove Occultations in ſome inhabited Parts of the Globe, are evidently deſigned to inſtruct Mariners or Travellers to look out

from the Meridian, the Latitude being given; or to compute the Time of the Sun's Setting or Riſing; which, though a leſs accurate Method than the former of obtaining the Time, may yet be uſeful when that cannot be had. For any of theſe Purpoſes, the Sun's Declination muſt be found to the Time given nearly reduced to the Meridian of Greenwich, making Proportion according to the daily Increaſe or Decreaſe, in like Manner as was ſhewn with Reſpect to the Sun's Longitude.

The Equation of Time is a Correction, which added to or ſubſtracted from the apparent Time (according to its Title at the Top of the Column) gives equated or mean Time, or that which ſhould be ſhewn by a good Clock or Watch. Apparent Time is that which takes its Beginning from the Paſſage of the Sun's Centre over the Meridian of any Place; and had the Sun no Motion in the Ecliptic, or was his Motion reduced to the Equator or in right Aſcenſion uniform, he would always return to the Meridian after equal Intervals of Time. But his apparent Motion in the Ecliptic being continually varying, and his Motion in right Aſcenſion being rendered further unequal on Account of the Obliquity of the Ecliptic to the Equator, from theſe Cauſes it ariſes that the Intervals of his Return to the Meridian become unequal, and the Sun will gradually come too ſlow or too ſoon to the Meridian for an equable Motion, ſuch as that of Clocks and Watches ought to be.

This Retardation or Acceleration of the Sun's coming to the Meridian is called the Equation of Time, and is contained in the laſt Column but One of Page 2d; and when applied according to its Title to the Apparent Time, or that deduced immediately from the Sun, gives the mean or equated Time, whence the Error of a Clock or Watch may be found, and, if required, it may be corrected.

If it is propoſed to convert mean Time into apparent, this is done by a contrary Proceſs, by applying the Equation of Time to the mean Time given, with its Title or Sign changed; *viz.* ſubſtracting inſtead of adding, and adding inſtead of ſubſtracting.

The Equation of Time being ſet down in the Ephemeris for the Noon at Greenwich, Proportion muſt be made according to the daily Difference, to find what it ſhould be at any given Time reduced to the ſame Meridian, as in the preceding Articles. The laſt Column of this Page, containing the daily Differences of the Equation, is deſigned for this Purpoſe.

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As often at it may be required to make any Calculations from aſtronomical Tables, and the Time given be apparent Time; it is neceſſary firſt to apply the Equation of Time thereto to convert it into mean Time, the Tables being diſpoſed according to mean Motions. Thus the Articles contained in the Ephemeris anſwering to Noon were computed to 0^h. increaſed, or 24 Hours diminiſhed, by the Equation of Time: And the Moon's Places ſet down for Midnight were computed to 12^h. increaſed or diminiſhed by the Equation of Time.

What has been ſhewn concerning the Equation of Time chiefly reſpects the Aſtronomer, the Mariner having little to do with it in computing his Longitude from the Moon's Diſtances from the Sun and Stars obſerved at Sea with the Help of the Ephemeris, all the Calculations thereof being adapted to apparent Time, the ſame which he will obtain by the Altitudes of the Sun or Stars in the Manner hereafter preſcribed.

But if Watches made upon Mr. John Harriſon's or other equivalent Principles ſhould be brought into Uſe at Sea, the apparent Time deduced from an Altitude of the Sun muſt be corrected by the Equation of Time, and the mean Time found compared with that ſhewn by the Watch, the Difference will be the Longitude in Time from the Meridian by which the Watch was ſet; as near as the Going of the Watch can be depended upon.

The Equation of Time was computed for the Ephemeris of 1767 from the Table, Page 3d of Mayer's Tables; but on Account of that Table being made only to the neareſt Second without Decimals, and the Neglect of the ſmall Equations of the Sun, the Calculations of that Article in the Year 1767, cannot always be depended upon nearer than Two Seconds. For the Year 1768 and the following Years it will be computed in the ſtrict Manner explained in my Remarks upon that Subject, in the Philoſ. Tranſact. Vol. liv. P. 342 for the Year 1764; namely, by taking the Difference of the Sun's true right Aſcenſion, and his mean Longitude corrected by the Equation of the Equinoxes in right Aſcenſion, and turning it into Time at the Rate of 1′. to 15′. &c. The Equation of Time will be additive or ſubſtractive as the Sun's true right Aſcenſion is greater or leſs than his mean Longitude.

The Semidiameter of the Sun, Page 3d, is neceſſary to reduce the obſerved Altitude of his upper or lower Limb to that

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of the Centre; alſo to reduce the obſerved Diſtance of the Moon's neareſt Limb from the Sun's neareſt Limb to the Diſtance of the Centres. It is alſo uſeful to Aſtronomers to verify or aſcertain the Exactneſs of the Scale of their Micrometers, by Compariſon with the Meaſure of the Sun's horizontal Diameter. This Practice is particularly uſeful in ſolar Eclipſes, when the Diſtance of the Cuſps or the Verſe Sine of the uneclipſed Part has been meaſured with the Micrometer. The Semidiameters of the Sun in Mayer's Tables, on which all the Calculations reſpecting the Sun and Moon are made, ſuppoſe the Semidiameter at the mean Diſtance to be 16'. 2''. 8. which Mr. Mayer ſays he deduced from above 130 Obſervations taken with his Six Foot mural Quadrant, which ſeemed to him not ill adapted to the Purpoſe. It may not be amiſs to take this Opportunity to remark that the Quadrant here mentioned was given to the Univerſity of Gottingen by his late Majeſty, and was made by Mr. John Bird after the Model of the Eight Foot mural Arch, which he finiſhed for the Royal Obſervatory at Greenwich, and put up there in the Year 1750. Mr. Mayer made his Obſervations with his Six Foot mural Arch, from the Year 1756, to the Time of his Deceaſe; with it he ſettled the mean Obliquity of the Ecliptic to the Beginning of the Year 1756, at 23°. 28'. 16''. which Dr. Bradley ſettled by his Obſervations made in the Years 1750 and 1751, at 23°. 28'. 18''. The Difference is agreeable to what ought to ariſe from the gradual Diminution of the Obliquity of the Ecliptic at the Rate of about ½ a Second in a Year. The ſame Inſtrument he alſo uſed in ſettling the Elements of his ſolar Tables; and it is moſt probable that with the ſame he ſettled his Table of Refractions at the End of his ſolar Tables; the Agreement of this Table with Dr. Bradley's, ſee Page 2d of requiſite Tables, (being both ſuited to the ſame Temperature of the Air) is ſo great, that they ſeem rather like One and the ſame than Two different Tables.

The Time of the Sun's Semidiameter paſſing the Meridian, ſerves to reduce an Obſervation of a Tranſit of the preceding or ſubſequent Limb over the Meridian to that of the Centre, when only One was obſerved. It ſignifies a Portion of apparent Time, or even mean Time, the Difference being abſolutely inſenſible upon ſo ſmall an Interval. It is found thus: Increaſe the Sun's Semidiameter in the Ratio of the Coſine of his Declination to the Radius, to find his Semidiameter in right Aſcenſion, which turned into Time at the Rate of 1'. to 15'. and 1''. to 15''. gives the

Time

Time required. The Sun's Semidiameter in right Aſcenſion is readily found by adding the Log. Coſine of his Declination to the logiſtic Logarithm of his Semidiameter, the Sum is the logiſtic Logarithm of his Semidiameter in right Aſcenſion; which divided by 15 gives the Time of his Semidiameter paſſing the Meridian. If the Clock by which the Obſervation is made be regulated according to ſidereal Time, this Quantity muſt be increaſed in the Ratio of 365 to 366, if great Preciſion is required.

From the Time of the Sun's Semidiameter paſſing the Meridian may be alſo found the Time of its paſſing the horizontal or vertical Wire of a Quadrant or Sextant, which on ſome Occaſions may have its Uſe.—The hourly Motion of the Sun is uſeful in computing ſolar and lunar Eclipſes; alſo in correcting the aſſumed Longitude of the Ship, in order to find the Time from an Obſervation of the Diſtance of the Moon from the Sun, independant of the Diſtances contained in the nautical Ephemeris; See Britiſh Mariner's Guide, Page 49, and Table at the End of the ſame, Page 25, which is alſo copied at Page 14 of requiſite Tables. The Logarithm of the Sun's Diſtance is uſeful in the Calculation of the Places of the Planets and Comets. The Place of the Moon's Node ſignifies its mean Longitude, and is neceſſary for finding the Equation of the equinoctial Points both in Longitude and right Aſcenſion, the Equation of the Obliquity of the Ecliptic, and the Deviations of the fixed Stars in right Aſcenſion and Declination.

The Eclipſes of Jupiter's Satellites are well known to afford the readieſt, and for general Practice the beſt Method of ſettling the Longitudes of Places at Land; and it is by their Means principally that Geography has been ſo much reformed within a Century paſt, and the Poſition of the moſt diſtant Places determined to equal Accuracy with the neareſt. It was hoped that ſome Means might be found of uſing proper Teleſcopes on Shipboard to obſerve theſe Eclipſes, and could this be effected, it would be of great Service in aſcertaining the Longitude of a Ship from Time to Time. In my Voyage to Barbadoes under the Direction of the Commiſſioners of Longitude, I made a full Trial of the late Mr. Irwin's Marine Chair propoſed for this Purpoſe, but found it totally impracticable to derive any Advantage from the Uſe of it; and, conſidering the great Power requiſite in a Teleſcope for making theſe Obſervations well, and the Violence as well as

Irregularities of the Motion of a Ship, I am afraid the complete Management of a Teleſcope on Shipboard will always remain among the Deſiderata. However, I would not be underſtood to mean to diſcourage any Attempt founded upon good Principles to get over this Difficulty.

The Teleſcopes proper for obſerving the Eclipſes of Jupiter's Satellites, are common refracting Teleſcopes, from 15 to 20 Feet, reflecting Teleſcopes of 18 Inches or Two Feet, and Teleſcopes of Mr. Dollond's Conſtruction with Two Object Glaſſes from Five to 10 Feet; or, which are ſtill more convenient, thoſe of $3\frac{1}{2}$ Feet, which he has lately found a Method of conſtructing with Three Object Glaſſes, which are as manageable as reflecting Teleſcopes, and perform as much as thoſe which he makes of 10 Feet with Two Object Glaſſes.

The Eclipſes of Jupiter's Satellites are obſerved by Aſtronomers at Land, as well in order to provide Materials for improving the Theories and Tables of their Motions, as for the ſake of Compariſon with the correſponding Obſervations which may be made by Perſons in different Parts of the Globe, whereby the Longitude of ſuch Places will be accurately aſcertained. It is indeed to be lamented that Perſons who viſit diſtant Countries are not more diligent to multiply Obſervations of this Kind, for want of which, the Obſervations made by Aſtronomers on Shore loſe Half their Uſe, and the Improvement of Geography ſeems to be at a Stand. But it is to be hoped that an Emulation will ſpring up among thoſe who may have Opportunities of rendering ſo uſeful a Service to the Public, to incite them to watch diligently for the Occaſions of obſerving theſe Eclipſes carefully, particularly of the Firſt and Second, which are moſt exact for the Purpoſe. The Eclipſes carefully calculated and ſet down in the Ephemeris, will ſerve to advertiſe them and Obſervers in general of the Times when they ſhould attend to theſe Obſervations. The Perſon who ſhall be under any Meridian different from Greenwich, muſt turn his Difference of Longitude into Time: See Table Page 6, 7, and 8, and add it to or ſubtract it from the Time of the Eclipſe ſet down in the Ephemeris, according as he is to the Eaſt or Weſt of Greenwich, to find the apparent Time at which the Eclipſe will happen at his Meridian, nearly. He muſt further take care to regulate his Watch or Clock by apparent Time, or at leaſt to know the Difference, as well in order to appriſe him of the Time to look out for the

the Eclipſe, as for aſcertaining the apparent Time exactly at which he ſhall obſerve it. Equal Altitudes of the Sun or Stars taken with an aſtronomical Quadrant afford the beſt Means of regulating Clocks and Watches for occaſional Obſervations; or they may be taken with a Hadley's Quadrant, by Reflection from a Baſon of Water or Quickſilver, or from the Horizon of the Sea, if the Obſerver has an open Proſpect, and is not elevated above 5 or 600 Feet above the Level of the Sea. But, if Opportunity does not admit of taking equal Altitudes, the Time may be determined from One Altitude taken in any of the Methods above mentioned, at leaſt Two or Three Points of the Compaſs diſtant from the Meridian, but the nearer to the Eaſt or Weſt the better, the Latitude of the Place being known, or being found by Obſervations of the Meridian Altitude of the Sun or Stars made on Purpoſe. It will be better to take ſeveral Altitudes in order to take a Mean of the Reſults for greater Certainty. The Manner of computing the apparent Time from the Altitude of the Sun or a Star, will be obſerved when we come to treat of the Method of finding the Longitude by the Obſervations of the Diſtance of the Moon from the Sun and Stars by the Help of the Ephemeris.

The Obſerver being in a Place whoſe Longitude is well known, ſhould be ſettled at his Teleſcope Three Minutes before the expected Time of an Immerſion of the firſt Satellite; Six or Eight Minutes before that of the ſecond and third Satellites; and a Quarter of an Hour or more before that of the fourth Satellite; chiefly on Account of the Uncertainty of their Theories; but, if the Longitude of the Place is very uncertain, he muſt begin to look out for the Eclipſe proportionably ſooner: Thus if the Longitude of the Place is uncertain to 30 Degrees, anſwering to 12 Minutes of Time, he ought to fix himſelf to his Teleſcope 12 Minutes ſooner than is mentioned above. Nevertheleſs when he has obſerved One Eclipſe of any Satellite, and thereby found the Error of the Tables, he may allow the ſame Correction to the Calculations of the Ephemeris for ſeveral Months, which will advertiſe him very nearly of the Time of expecting the Eclipſes of the ſame Satellite, and diſpenſe with his attending ſo long.

The Immerſions ſignify the Inſtant of the Diſappearance of the Satellite by entering into the Shadow of Jupiter; and the Emerſions ſignify the firſt Inſtant of its Appearance at coming

ing out of the ſame. They generally happen when the Satellite is at ſome Diſtance from the Body of Jupiter, except near the Oppoſition of Jupiter to the Sun, when the Satellite approaches nearer to his Body. Before the Oppoſition of Jupiter to the Sun the Immerſions and Emerſions happen on the Weſt Side of Jupiter, and after the Oppoſition on the Eaſt Side; but if an aſtronomical Teleſcope be uſed, which reverſes Objects, the Appearances will be directly the contrary. Before the Oppoſition, the Immerſions only of the firſt Satellite are viſible; and after the Oppoſition, the Emerſions only. The ſame is generally the Caſe with reſpect to the ſecond Satellite; both the Phænomena of the ſame Eclipſe are frequently obſerveable in the Two outer Satellites. The Immerſions and Emerſions marked with an Aſteriſk in the Ephemeris are thoſe viſible at Greenwich.

To know if an Eclipſe will be viſible in any Place, find if Jupiter is 8°, or 10°, above the Horizon of the Place, and the Sun as much below it. This may be done near enough by a celeſtial Globe: Otherwiſe, the Time of the Sun's Riſing and Setting may be found for any Latitude by a Table of ſemidiurnal Arcs, contained in the popular Book called the Mariner's Compaſs Rectified, and many other Books; the Time of Jupiter's Riſing and Setting may alſo be found from the Time of his paſſing the Meridian and Declination ſet down in the Ephemeris, with the Help of the ſame Table of ſemidiurnal Arcs; adding or ſubſtracting the ſemidiurnal Arc anſwering to the ſame Declination of the Sun: Remembering always that if Jupiter's Declination and the Latitude of the Place are of the ſame Denomination, the ſemidiurnal Arc will be more than Six Hours, and if they are of contrary Denominations, it will be leſs than Six Hours.

The Immerſion or Emerſion of any Satellite being carefully obſerved in any Place according to apparent Time, the Longitude from Greenwich is found immediately by taking the Difference of the Obſervation from the correſponding Time ſhewn in the Ephemeris, which muſt be turned into Degrees, &c. by Table Page 6, 7, and 8; and will be Eaſt or Weſt of Greenwich, as the Time obſerved is more or leſs than that of the Ephemeris.

Example: Suppoſe an Emerſion of the firſt Satellite ſhould be obſerved at the Cape of Good-Hope, May 9, 1767, at $10^{h.}\ 46'.\ 45''.$ apparent Time: The Time by the Ephemeris being

being 9^h. 33′. 12″. the Difference is 1^h. 13′. 33″. whence by Table Page, 6, 7, and 8, the Longitude of the Cape ſhould be 18°. 23′ 15″. Eaſt of Greenwich, becauſe the Time ſuppoſed to be obſerved at the Cape is more than that of the Ephemeris.

It may not be uſeleſs here to obſerve that the Longitude of the Cape of Good Hope 1^h. 13′. 33″=18°. 23′. 15″. ſet down in the Britiſh Mariner's Guide, is that of the Town; the Latitude alſo belongs to the ſame; being both determined from the Obſervations of Meſſrs. Maſon and Dixon, who went thither under the Direction of the Royal Society, and obſerved the Tranſit of Venus in the Year 1761. Hence, by the Help of the Charts, I find the Longitude of the Cape Point or Promontory 18°. 45′. Eaſt of Greenwich, and its Latitude 34°. 30′. S. the Longitude of Cape Falſo, 19°. 15′. E. and its Latitude 34°. 34′ S. If theſe Determinations of the Situations of the Cape Point and Cape Falſo are in any reſpect uncertain, it ariſes from the Imperfection of the Charts I was obliged to make uſe of, in reducing the Longitude and Latitude from the Cape Town to the Two mentioned Points: For from the near Agreement of the Abbeé de la Caille's Obſervations with thoſe of Meſſrs. Maſon and Dixon, it is probable that the Situation of few Places is better determined than that of the Cape Town: But if any one has Poſſeſſion of any Manuſcript or printed Charts of theſe Parts that he thinks may be depended upon, or has any Opportunity of determining the Points in Queſtion relatively to each other from the Compariſon of ſeveral Journals of Ships, he may perhaps fix theſe Places with more Certainty than is here pretended to.

It is to be obſerved that a correſpondent Obſervation of an Eclipſe of a Satellite of Jupiter, made under a well known Meridian, is to be preferred to the Calculations of the Ephemeris for comparing with an Obſervation made in a Meridian whoſe Longitude is required; but if no correſponding Obſervation can be obtained, as is frequently the Caſe, it will be beſt to find what Correction the Calculations of the Ephemeris require by the neareſt Obſervations to the given Time that can be obtained; which Correction applied to the Calculation of the given Eclipſe in the Ephemeris, renders it almoſt equivalent to an actual Obſervation.

The Longitudes and Latitudes of the Planets, Page 4, ſerve to know where to look for them in the Heavens, and when

when their Places may be conveniently ſettled by comparing them with fixed Stars by the Help of a Micrometer in a Teleſcope. They alſo ſhew when they are in the moſt important Points of their Orbits, where it is moſt material to obſerve them. They alſo ſerve to enable Perſons leſs ſkilled to diſtinguiſh them from the fixed Stars. Their Declinations and apparent Time of paſſing the Meridian are particulary uſeful to Aſtronomers who are furniſhed with Quadrants and Tranſit Inſtruments well fixed in the Meridian, in ſetting their Inſtruments for obſerving their right Aſcenſions and Declinations.

The apparent Time of a Planet's paſſing the Meridian may be computed thus; the Planet's right Aſcenſion being calculated from its Longitude and Latitude, and turned into Time, ſubſtract the Sun's right Aſcenſion at Noon in Time from it, to find the Time of the Planet's paſſing the Meridian nearly, which call T; take the Difference of the ☉ and Planets daily Variations in right Aſcenſion in Time; if the Planet is progreſſive in right Aſcenſion, or the Sum if it is retrograde, which call X; then ſay, by the Rule of Proportion;

As $24^h \mp X : T :: X : e$ and $T \pm$ will be the correct Time of the Planet's paſſing the Meridian. The upper Signs are to be uſed both to X and e if the Planet's progreſſive Motion in right Aſcenſion be greater than that of the Sun; in any other Caſe the lower Signs are to be made uſe of.

But perhaps it may be found more readily by continual Approximation as follows: Take the proportional Part of the Difference or Sum of the ☉ and Planet's daily Motion in right Aſcenſion, anſwering to the Time of the Planet's paſſing the Meridian, found nearly, in Proportion to 24^h. and take a further like proportional Part of this proportional Part; and again of this laſt, and ſo on as far as is neceſſary. The Sum of all theſe proportional Parts added to the Time of the Planet's paſſing the Meridian found nearly, if the Planet's progreſſive Motion in right Aſcenſion is greater than that of the Sun, otherwiſe ſubſtracted, gives the apparent Time of the Planet's paſſing the Meridian.

Example: Let it be required to find the Time of the Moon's paſſing the Meridian, July 1 1767.

The Sun's right Aſcenſion in Time July 1ſt is, $6^h. 40'. 25''$. and July 2d, $6^h. 44'. 33''$. by the Ephemeris. Therefore his daily Motion in right Aſcenſion is $4'. 8''$. The Moon's right Aſcenſion July 1ſt at Noon by the Ephemeris, is $159°. 2'$. anſwering to $10^h. 36'. 8''$. of Time, and July 2d is, $169°. 39'$. anſwering

ſwering to 10h. 18′. 36″. The Difference is, 42′. 28″. of Time, from which 4′. 8″. being ſubſtracted leaves 38′. 20″. Subſtract 6h. 40′ 25″. the Sun's right Aſcenſion July 1ſt, at Noon from 10h. 36′. 8″, the Moon's right Aſcenſion the ſame Noon, the Remainder 3h. 55′. 43″. is the Approximate Time of the Moon's paſſing the Meridian. The proportional Part of 38′. 20″ anſwering to this, is 6′. 17″ and the proportional Part of 6′. 17″. is 9″; therefore 6′. 17″ and 9″ or 6′. 26″ added to 3h. 55′. 43″ give 4h. 2′. 9″, the apparent Time of the Moon's paſſing the Meridian. In the Ephemeris it is 4h. 2′. It may alſo be computed by taking the Difference of the Moon's right Aſcenſions at Noon and Midnight, but then half the Sun's daily Variation in right Aſcenſion muſt be made uſe of, and Proportion muſt be made for 12 inſtead of 24 Hours: And if the Moon paſſed the Meridian after Midnight, the Sun's right Aſcenſion at Midnight muſt be uſed, which is a Mean between his right Aſcenſions on the preceding and ſubſequent Noon. For the Planet's, it will be ſufficient to take the firſt proportional Part only.

The Configurations of Jupiter's Satellites, Page 5, exhibit the apparent Poſitions of the Satellites with reſpect to each other, and to Jupiter at ſuch an Hour of the Evening or Night as they are moſt likely to be obſerved, and ſerve to diſtinguiſh the Satellites from one another. Jupiter is diſtinguiſhed by the Mark ⊙, and the Satellites by Points with Figures annexed, the Figure 1 ſignifying the firſt Satellite, 2 the ſecond Satellite, &c. When the Satellite is approaching towards Jupiter, the Figure is put between Jupiter and the Point; and when the Satellite is receding from Jupiter, the Figure is put on the other Side of the Point. The Satellites are in the ſuperior Parts of their Orbits, or furtheſt from the Earth, when they are marked to the right Hand or Weſt of Jupiter approaching him; or to the left Hand or Eaſt of Jupiter receding from him; but are in the inferior Part of their Orbits, or neareſt to the Earth, when they are marked to the right Hand or Weſt of Jupiter receding from him, or to the left or Eaſt of Jupiter approaching him. The Cypher o ſometimes annexed to the Figure of the Satellite towards the Margin, ſignifies that it is inviſible on the Face of Jupiter; and the black Mark ●, ſignifies that it is inviſible, being eclipſed in Jupiter's Shadow, or behind Jupiter, and eclipſed by his Body.

The 7th and 5 following Pages of each Month contain the Moon's Place, and all the Circumſtances relating to her Motions,

tions, and her Diſtances from the Sun and proper Stars, from which her Diſtance ſhould be obſerved for finding the Longitude at Sea. The Longitudes, Latitudes, and Declinations of the Moon, and Time of her paſſing the Meridian, afford the like Uſes with the ſame Circumſtances of the Planetary Motions, and many more beſides. For the ſake of greater Preciſion, the Moon's Longitude, Latitude, Right Aſcenſion, Declination, Semidiameter, horizontal Parallax, with its logiſtic or proportional Logarithm, are computed twice a Day, to Noon and Midnight, and may readily be inferred to any intermediate Time with the greateſt Exactneſs.

Example: Let it be required to find the Moon's Longitude and Latitude, &c. July 16, 1767, at $16^h. 22'. 16''$. Firſt to find the Longitude. The Moon's Longitude, July 16, at $12^h.$ is $0^s. 6°. 40'. 25''.$ and July 17 at Noon, $0^s. 13°. 47'. 48''.$ the Difference $7°. 7'. 23''.$ is the Moon's Motion in 12 Hours; ſay then, by the Rule of Proportion,

As $12^h.$ is to $4^h. 22'. 16''.$ (the Exceſs of $16^h. 22'. 16''.$ above $12^h.$) ſo is $7°. 7'. 23''.$ to $2°. 35'. 41''.$ which added to $0^s. 6°. 40'. 25''.$ the Moon's Longitude at $12^h.$ gives $0^s. 9°. 16'. 6''$, the Moon's Longitude nearly; but this muſt be corrected on Account of the Moon's unequal Motion in 12 Hours, by Page 11 of requiſite Tables; for this Purpoſe take out of the Ephemeris the Two Longitudes of the Moon next preceding the given Time, and the Longitudes immediately following it, and ſet them down in Order one after another, as follows.

		1ſt Diff.	2d. Diff.
	ˢ ° ′ ″	° ′ ″	′ ″
July 16, Noon	11. 29. 29. 34.	7. 10 51.	
Midnight	0. 6. 40. 58.		3. 28.
17, Noon	0. 13. 47. 24.	7. 7. 23.	
Midnight	0. 20. 51. 27.	7. 3. 39.	3. 44.

Take their Differences, $7°. 10'. 51''. 7°. 7'. 23''. 7°. 3'. 39''.$ take the Differences of theſe Differences, or the 2d Differences, $3'. 28''. 3'. 44''.$ and take their Mean which is $3'. 36''.$ Now look for the Correction in Page 11 of requiſite Tables anſwering to $4^h. 22'$ after Midnight, found on the Side, and $3'\ 36''$ at Top, $21''$ will be found under $3'.$ and $28''.$ under $4'.$ the the Difference is $7''.$ whence $36''$ will require $4''$, and the Correction ſought is $21''+4''=25''.$ which, according to the Remark at the Bottom of the Table, muſt be added (becauſe

cauſe the Motion in 12 Hours or firſt Differences are decreaſing to 0ˢ. 9°. 16′. 6″. the Moon's Longitude found by even Proportion; whence the Moon's true Longitude is 0ˢ. 9°. 16′. 31″. and is as correct as the Longitudes from which it is deduced.

N. B. If the firſt Differences of the Four Longitudes of the Moon taken out firſt increaſe and then decreaſe, or, vice verſâ, firſt decreaſe and then increaſe, take half the Difference of the Two ſecond Differences for the Mean ſecond Difference, with which take the Correction from Page 11, and add or ſubſtract it as the 1ſt. firſt Difference is greater or leſs than the third firſt Difference.

To find the Moon's Latitude. Take out of the Ephemeris the Two Latitudes preceding and Two following the given Time, and ſet them down in Order, and take their firſt and ſecond Differences, and the mean of the Two ſecond Differences; find the proportional Part of the Middle firſt Difference anſwering to the Hours and Minutes, &c. of the given Time after Noon or Midnight; which correct in the following Manner: Entering Table Page 11 with the Hour from Noon or Midnight on the Side, and the mean ſecond Difference at Top, take out the correſponding Number of Seconds, which added to or ſubſtracted from the proportional Part found above, according as the Motion in 12 Hours or firſt Differences are decreaſing or increaſing; or, more generally, according as 1ſt firſt Difference is greater or leſs than third firſt Difference, gives the proportional Part corrected; which now added to or ſubſtracted from the Moon's Latitude at the preceding Noon or Midnight, as the Latitude in theſe 12 Hours is increaſing or decreaſing, gives the Moon's Latitude correct.

Example: The Moon's Latitude is required, July 16, 16ʰ. 22′. 16″.

	☽'s Lat. by the Ephem.	1ſt Dif.	2d Dif.	Mean of 2d Dif.
	°. ′. ″.	′. ″.	′. ″.	′. ″.
July 16, Noon	4 31 10 N.	18 26		
Midnight	4 49 36		4 36	4 40
17 Noon	5 3 26	13 50	4 44	
Midnight	5 12 32	9 6		

The Moon's Latitude July 16 at Midnight being 4°. 49′. 36″. N. and the Motion in the next 12 Hours being 13′. 50″. ſay by Proportion;

As 12^h. is to 4^h. 22′. 16″. ſo is 13′. 50″. to 5′. 2″; but this muſt be corrected by adding 33″. the Correction from Page 11, anſwering to the Hour 4^h. 22′. and the Mean Second Difference 4′ 40″, becauſe the firſt Differences are decreaſing, or rather becauſe the firſt of them 18′. 26″. is greater than the laſt of them 9′. 6″. therefore the proportional Part corrected is 5′. 2″. + 33″ = 5′. 35″, which added to 4°. 49′. 36″. gives 4°. 55′ 11″. N. the Moon's Latitude correct.

Remarks on ſome Circumſtances neceſſary to be attended to, in order to obtain and apply the Correction of ſecond Differences rightly in computing the Moon's Latitude.

I. If the Moon's Latitude taken out of the Ephemeris for Noon and Midnight changes its Denomination from North to South or from South to North, the Sum of the Two Latitudes of contrary Denominations, where the Change happens, is to be accounted the firſt Difference in that Place.

II. If the Three firſt Differences firſt increaſe and then decreaſe, or vice verſa, firſt decreaſe and then increaſe, Half the Difference of the Two ſecond Differences is to be taken for the mean ſecond Difference.

III. If the Series of Four Latitndes taken out ſhould firſt increaſe and then decreaſe about the Moon's greateſt Latitudes, take the Sum of the Two firſt Differences ſtanding on each Side of the greateſt Latitude for the ſecond Difference in that Place; correct the Moon's Latitude at Noon or Midnight by the ſimple proportional Part firſt found; and to the Latitude ſo corrected, add always in this Caſe the Correction from Table Page 11, anſwering to the Mean of the Two ſecond Differences.

Before I quit this Subject of Interpolation by ſecond Differences, I ſhall point out another Method, by which the ſame End may be obtained more readily, and with fewer Rules, by thoſe who are well acquainted with algebraical Subſtraction and Addition, and the Manner of applying the Signs in thoſe Operations. Subſtract each Latitude from the following for the firſt Differences, to which prefix the Sign — if the Latitudes decreaſe; and ſubſtract each firſt Difference, thus found, from the following one of the ſame Order for the ſecond Differences. Half the Sum of the Two ſecond Differences

ferences ſtanding on each Side of the Interval to be interpolated, is to be accounted the mean ſecond Difference; the Correction correſponding to it by Table Page 11, is to be applied always with the contrary Sign.

Theſe Operations are to be performed, and the Signs to be applied as in algebraic Subſtraction and Addition. Note further, if the Four given Latitudes change their Denomination, call the ſecond Latitude +, and thoſe of a contrary Denomination —.

The Moon's Declination may be found at any Hour in the ſame Manner as her Latitude; but as the Correction ariſing from ſecond Differences will never exceed $2\frac{1}{2}'$, this may be neglected on moſt Occaſions: but if any one is deſirous to obtain the Declination true to a Minute, the Correction eaſily applied, as ſhewn above.

The other Articles of Page 7, and 8, *viz.* the Moon's right Aſcenſion, her Semidiameter, horizontal Parallax, with its Logarithm, and the Diſtances contained in the Four laſt Pages of the Month, may be all found correctly by even Proportion, without requiring any Allowance on Account of ſecond Differences. The proportional Part of the Moon's Longitude, *&c.* for any Hour, may be found very readily by the Help of the Table of proportional Logarithms at the End of the requiſite Tables: For which conſult the Explanation of thoſe Tables.

The Moon's Longitude and Latitude are uſed in computing her Diſtances from the Sun and Stars contained in the Four laſt Pages of the Month, as well as in the Appulſes to Stars pointed out in Page 1, and, jointly with her Parallax and Semidiameter, are neceſſary for computing the Eclipſes of the Sun and Moon, and the Occultations of fixed Stars and Planets by the Moon. They alſo facilitate the Calculation of the Longitude of any Place from an Eclipſe of the Sun, or an Occultation of a Star or Planet by the Moon obſerved: Or, if the Meridian be well known, the Parallax and Semidiameter ſerve to deduce the Moon's true Place in the Heavens from the Obſervation, which compared with that given by the Ephemeris ſhews the Error of the Tables, whatever it be at that Time. The Moon's Semidiameter and Parallax are applied in correcting almoſt all Obſervations of the Moon. The logiſtic Logarithms of the Moon's Parallax, ſerve further to facilitate the Calculations of Parallaxes, but if the Table of proportional Logarithms at the End of the requiſite Tables be made uſe,

of, which will be moſt convenient; the conſtant Quantity 0.4771 muſt be added to the logiſtic Logarithms of the Moon's horizontal Parallax contained in the Ephemeris of 1767, to reduce them to proportional Logarithms. It will be more convenient to ſubſtitute proportional Logarithms of the Moon's Parallax inſtead of the logiſtic Logarithms in a future Ephemeris.

The Moon's right Aſcenſion and Declination are uſeful to compute her Altitude at any Time, particularly at the Obſervation of her Diſtance from the Sun or a Star, ſuppoſing it was neglected to be or could not be obſerved properly; which latter Caſe may ſometimes happen in the Night, though I think but rarely; the utmoſt Accuracy not being required for the Calculations of Refraction and Parallax. See Britiſh Mariner's Guide. Page 57. The Moon's Declination, with her Semidiameter and Parallax, ſerve for finding the Latitude by the Meridian Altitude of her upper or lower Limb obſerved at Sea. See Britiſh Mariner's Guide, Page 93. The Moon's right Aſcenſion and Declination ſerve alſo to compute the Time from her Altitude obſerved at the Obſervation of her Diſtance from a Star; whence the Longitude may be inferred, though no Altitude of the Sun or a Star was taken for regulating the Time. See Britiſh Mariner's Guide, Page 61.

The Diſtances of the Moon from the Sun and fixed Stars, contained in the Four laſt Pages of the Month, are ſet down to every Three Hours of Apparent Time by the Meridian of Greenwich, and are deſigned to relieve the Mariner from the Neceſſity of a Calculation, which he might think prolix and troubleſome, and to enable him, when compared with the ſame Diſtances obſerved carefully at Sea, to infer his Longitude readily and with little Danger of Miſtake to a Degree of Exactneſs that may be thought ſufficient for moſt nautical Purpoſes. But uſeful and valuable as the Practice of this Method may be at preſent, it is a Remark not unworthy our Notice, that there is Room to hope, by future Improvements of the lunar Tables, and the Introduction of a more accurate Method of conſtructing Inſtruments, it may be carried to a much higher Degree of Perfection.

The Moon's Diſtance are computed both from the Sun and proper Stars, and generally from One Object on each Side of her, to afford the Mariner a greater Number of Opportunities of Obſervation, and a Means of attaining a greater Degree of Exactneſs. The Diſtances from the Sun

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are computed between 40° and 120° of Diſtance. While the Moon is between the Diſtances of 20° and 40° from the Sun, her Diſtance is computed only from a Star on the contrary Side that the Sun is. When ſhe is between the Diſtances of 40° and 90° from the Sun, her Diſtance is computed both from the Sun and from a Star on the contrary Side to the Sun; when the Moon is above 90° from the Sun her Diſtance is computed from Two Stars, one on each Side of her; though ſtill her Diſtance is computed alſo from the Sun from 90° to 120°. Though the Diſtance of the Moon from the Sun or Star, well obſerved with a good Inſtrument, is ſufficient to determine the Longitude, with the Help of the Ephemeris, always within a Degree, and generally much nearer, yet it will conduce to ſtill greater Accuracy, if the Obſerver takes the Diſtance of the Moon from Two Stars, or the Sun and a Star, or, when the Moon is between 90 and 120° Diſtance from the Sun, from the Sun and Two Stars, if he can be ſo lucky as to obtain theſe ſeveral Obſervations.

The Longitude being computed from the Obſervations made with each Star reſpectively, the Mean of the Reſults is to be taken as probably approaching neareſt to the true Longitude. In particular the Moon's Diſtance ſhould be taken from Two Stars, or the Sun and a Star on each Side of her, as often as Opportunity permits, ſince the Mean of the Reſults will probably be at leaſt as exact again as either ſeparately, I mean as far as depends on any Imperfection of the Inſtruments, and unavoidable ſmall Errors ariſing in the Uſe of them; Errors of theſe Kinds having a natural tendency to correct each other; for that ſmall Error which ariſes from the lunar Tables will affect the Reſult from either Star equally. But the Error of Mr. Mayer's laſt lunar Tables here made uſe of, ſcarce ever exceeding 1′ at the moſt, and ſeldom amounting to 20″, the Uncertainty hence ariſing in the Determination of the Longitude can ſcarcely exceed half a Degree, and generally will not exceed 10 Miles.

The Diſtances ſet down in the Ephemeris, afford the Obſerver a ready Means of knowing the Star from which the Moon's Diſtance is to be obſerved; for he has nothing to do but to ſet his Quadrant to the Diſtance computed roughly from the Ephemeris, neglecting the Seconds, at the apparent Time eſtimated nearly by the Meridian of Greenwich; and direct his Sight to the Eaſt or Weſt of the Moon, according as the Diſtance at Greenwich is found in Page 9 and

10,

10, or in Two laſt Pages of the Month; and having found the Moon upon the little Speculum, let him give a Sweep with the Quadrant to the Right and Left, and he will find the Star he ſeeks for, if above the Horizon and the Air be clear, nearly in a Line perpendicular to the Line of the Moon's Horns or longer Axis, or, which is the ſame Thing, in the Line of the Moon's ſhorter Axis produced. The Star is always one of the brighteſt, ſo that there is little Danger of miſtaking another for it, if the preceding Directions are carefully obſerved. The Time at Greenwich is eſtimated nearly by turning the ſuppoſed Longitude from Greenwich into Time, by Table Page 6, 7, and 8, and adding it to or ſubſtracting it from the Apparent Time at the Ship, as its Longitude is Weſt or Eaſt of Greenwich. It will be ſufficient if the Diſtance be computed from the Ephemeris within 10′. or 20′. for ſetting the Quadrant. The principal Uſe of the Diſtances of the Moon from the Sun and fixed Stars; namely, in determining the Longitude by Compariſon with the correſponding Diſtances obſerved at Sea, will be ſhewn hereafter in its proper Order, in the Diſſertation explaining the Method of computing the Longitude at Sea by the Help of the Ephemeris.

The Diſtances contained in the Ephemeris were computed ſtrictly to Noon and Midnight, and thence interpolated for every Three Hours, according to the Method ſhewn for computing the Moon's Latitude, Page 17—19: Except that the Correction of ſecond Differences at the Middle of the Interval to be interpolated, was taken $\frac{1}{8}$ of the Mean of the Two ſecond Differences, and at the firſt and third Quarter of the Interval was taken $\frac{3}{4}$ of the Correction juſt found at the Middle of the Interval; inſtead of conſulting Table Page 11, which would however have given the ſame Reſult. But, at the firſt 12 Hours when the Diſtances of the Moon from a Star begin, and the laſt 12 Hours when the Diſtances end, there being only One ſecond Difference inſtead of Two ſecond Differences on each Side to take a Mean of, this Method fails in theſe Caſes, and therefore the following is to be ſubſtituted in its ſtead, being derived from Sir Iſaac Newton's Solution of the Problem of drawing a Curve through the Extremities of any Number of given Ordinates. Phil. Nat. Princ. Math. Page 486. Edit. ult.

From Four Diſtances at Noon and Midnight computed ſtrictly, to interpolate Three Diſtances at the 3d, 6th, and 9th Hour of the firſt or laſt Interval.

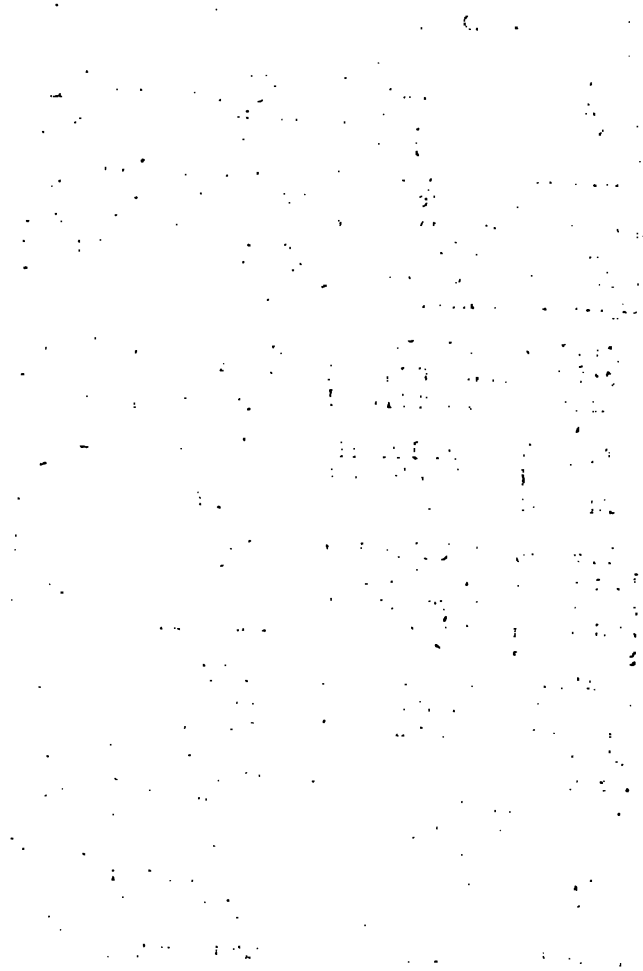
Subſtract

Subſtract each Diſtance from the following, for the firſt Differences, and prefix the Sign —, if the Diſtances decreaſe. Subſtract each firſt Differenee thus found from the following one of the ſame Order, for the ſecond Differences: And in like Manner ſubſtract the firſt 2d Difference from the following for the third Difference; applying the Signs as in algebraic Subſtraction. Denote the firſt or laſt firſt Difference by b, the firſt or laſt ſecond Difference by c; according as the Interpolation to be made is for the firſt or laſt 12 Hours, denote alſo the third Difference by d; and, a being put to ſignify the Diſtance at the Beginning of the Interval, the interpolated Diſtances will be as follows:

At 3d Hour of firſt Interval	$a + \frac{1}{4}b - \frac{3}{32}c + \frac{7}{1152}d$
At 6th Hour of firſt Interval	$a + \frac{1}{2}b - \frac{1}{8}c + \frac{1}{128}d$
At 9th Hour of firſt Interval	$a + \frac{3}{4}b - \frac{3}{32}c + \frac{5}{1152}d$
Or	
At 3d Hour of laſt Interval	$a + \frac{1}{4}b - \frac{3}{32}c - \frac{5}{1152}d$
At 6th Hour of laſt Interval	$a + \frac{1}{2}b - \frac{1}{8}c - \frac{1}{128}d$
At 9th Hour of laſt Interval	$a + \frac{3}{4}b - \frac{3}{32}c - \frac{7}{1152}d$

In adapting theſe Formulæ to Numbers, great Care muſt be taken about the right Application of the Signs. Thus if b, c or d is Negative, apply the Number expreſſing the Value of that Term of the Formula where it is found with a contrary Sign to that of the Formula.

Let me add in this Place, that if in filling up the firſt and laſt Intervals, a new ſecond Difference has been ſuppoſed in arithmetical Progreſſion with the Two given ones, in order to take a Mean between it and the firſt or laſt ſecond Difference, the Interpolation at the Middle of the Interval or 6th Hour will be had true, the ſame as if the above Formulæ had been uſed: But at the Interpolation of the firſt and third Quarter there will be an Error of $\frac{1}{1152}$ third Difference; which will be corrected, by applying $+\frac{1}{1152}d$ or third Difference, to Number found at the firſt Quarter of the Interval, and $-\frac{1}{1152}d$ to that found at the third Quarter of the Interval; equally the ſame whether it be the firſt or laſt Interval.



One thouſand Two hundred and Twenty LONGITUDES and LATITUDES of the MOON.

DEDUCED FROM

DR. BRADLEY'S OBSERVATIONS.

MADE BETWEEN

SEPTEMBER 13th, 1750, and NOVEMBER 2d, 1760,

AND

Compared with a Set of Manuſcript Tables.

	Days.	Mean Time of Tranſit of ☽'s Limb.	☽'s Longitude obſerved.	☽'s Latitude obſerved.	Error of Tab. in Long.	Error of Tab. in Lat.
1750	N.S.	H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Sept.	13	9. 58. 5	10. 21. 29. 43	4. 4. 22 N	— 43	— 21
	17	13. 35. 35	0. 23. 55. 12	4. 27. 14 N	+ 10	— 17
	19	15. 32. 10	1. 24. 41. 51	2. 38. 25 N	+ 1	+ 4
	23	19. 19. 2	3. 21. 6. 38	2. 7. 0 S	— 18	+ 2
	24	20. 8. 15	4. 4. 14. 20	3. 5. 55 S	— 11	— 1
Oct.	10	7. 44. 21	10. 14. 19. 1	3. 52. 45 N	— 10	— 25
	12	9. 27. 17	11. 14. 4. 5	4. 58. 49 N	— 55	— 23
	13	10. 20. 11	11. 29. 38. 31	5. 2. 7 N	— 60	— 21
	14	11. 15. 9	0. 15. 30. 14	4. 42. 30 N	— 43	— 11
	15	12. 15. 8	1. 1. 28. 53	4. 0. 31 N	— 9	+ 8
	17	14. 16. 58	2. 2. 49. 27	1. 48. 6 N	+ 14	+ 19
Nov.	4	3. 56. 22 :	9. 12. 13. 47	1. 45. 41 N	— 4	— 24
	5	4. 47. 2	9. 25. 22. 37	2. 49. 42 N	+ 3	— 33
	6	5. 36. 56	10. 8. 52. 40	3. 46. 3 N	+ 3	— 36
	7	6. 26. 16	10. 22. 47. 22	4. 31. 5 N	— 4	— 32
	9	8. 5. 51	11. 21. 58. 49	5. 11. 40 N	— 24	— 22
	12	10. 51. 19	1. 8. 38. 28	3. 35. 20 N	— 38	+ 5
	14	12. 58. 14	2. 10. 3. 15	1. 5. 10 N	— 5	+ 11
	19	17. 32. 34	4. 21. 2. 42	4. 30. 5 S	+ 11	— 17
Dec.	2	2. 44. 20	9. 21. 21. 40	2. 36. 40 N	— 33	— 36
	6	5. 59. 25	11. 16. 27. 55	5. 16. 6 N	— 15	— 35
	8	7. 40. 12	0. 15. 54. 34	4. 49. 59 N	+ 5	— 16
	9	8. 34. 48	1. 1. 3. 31	4. 6. 12 N	— 22	— 7
	10	9. 32. 56	1. 16. 24. 25	3. 4. 28 N	— 16	— 2
	11	10. 34. 6	2. 1. 49. 22	1. 49. 1 N	— 1	+ 6
	12	11. 37. 54	2. 17. 9. 51	0. 26. 47 N	— 6	— 21
	18	16. 53. 27	5. 11. 17. 41	5. 11. 58 S	+ 25	— 8
	21	18. 59. 11	6. 18. 31. 8	4. 43. 37 S	+ 23	— 11
	22	19. 42. 31	7. 0. 42. 30	4. 6. 57 S	+ 28	+ 6
1751 Jan.	7	8. 20. 20 ::	1. 25. 20. 30	2. 20. 5 S	+ 26	— 10
	8	9. 20. 24	2. 10. 13. 58	1. 2. 47 N	+ 11	— 3
	9	10. 21. 3	2. 25. 3. 39	0. 18. 15 S	+ 3	+ 5
	11	12. 17. 40	3. 24. 9. 30	2. 47. 51 S	+ 5	+ 35
	17	16. 53. 54	6. 13. 25. 20	4. 48. 24 S	+ 12	+ 6
	18	17. 36. 52	6. 25. 41. 23	4. 16. 48 S	+ 23	— 5

1751	DAYS. N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Feb.	6	9. 9. 57	3. 4. 4. 17	1. 13. 29 S	+ 17	— 11
	7	10. 5. 58	3. 18. 14. 13	2. 23. 7 S	+ 9	+ 15
	9	11. 48. 39	4. 15. 55. 30	4. 11. 42 S	— 19	+ 4
	10	12. 37. 38	4. 29. 24. 18	4. 44. 5 S	— 22	+ 16
	15	16. 15. 7	7. 2. 49. 22	3. 39. 39 S	+ 22	+ 14
	19	19. 27. 27	8. 22. 7. 48	0. 16. 55: N	+ 1	— 1
	20	20. 19. 7	9. 4. 59. 38	1. 24. 16: N	+ 3	— 11
Mar.	5	7. 5. 9	2. 29. 44. 44	1. 3. 27 S	— 10	+ 2
	8	9. 43. 45	4. 11. 5. 45	4. 2. 23 S	— 25	+ 7
	15	14. 55. 14	7. 10. 16. 15	2. 56. 36 S	+ 7	+ 5
	19	18. 9. 10	8. 29. 28. 7	1. 11. 19 N	— 28	+ 1
	20	18. 59. 50	9. 12. 15. 48	2. 15. 19 N	— 27	— 29
	31	3. 58. 46	2. 10. 19. 7	0. 23. 51 N	+ 4	— 6
Apr.	2	5. 56. 34	3. 9. 27. 17	2. 6. 55 S	— 5	+ 51
	3	6. 50. 51	3. 23. 25. 29	3. 11. 6 S	— 29	+ 3
	6	9. 13. 49	5. 3. 21. 55	4. 59. 10 S	— 23	— 8
	9	11. 22. 6	6. 11. 18. 25	4. 31. 32 S	— 24	+ 12
	10	12. 6. 21	6. 23. 40. 40	3. 55. 8 S	— 17	— 7
	11	12. 51. 48	7. 5. 57. 5	3. 7. 58 S	— 7	— 1
	20	20. 9. 5	11. 0. 46. 4	5. 2. 20 N	+ 55	— 12
May	2	6. 26. 16	4. 16. 4. 26	4. 39. 10 S	— 4	— 7
	3	7. 12. 21	4. 29. 18. 47	5. 4. 26 S	— 8	— 15
	4	7. 56. 11	5. 12. 13. 32	5. 13. 5 S	— 5	— 9
	5	8. 38. 45	5. 24. 52. 56	5. 6. 35 S	— 6	— 2
	14	15. 39. 0	9. 15. 51. 39	2. 53. 21 N	— 43	— 2
	16	17. 14. 42	10. 11. 46. 1	4. 31. 40 N	— 38	— 5
	17	18. 2. 3	10. 25. 13. 40	5. 2. 0 N	— 43	— 4
	19	19. 38. 29	11. 23. 27. 17	5. 11. 1 N	— 68	+ 4
	20	20. 29. 27	0. 8. 16. 6	4. 45. 38 N	— 80	+ 13
	30	5. 7. 35	4. 24. 22. 37	5. 1. 51 S	+ 39	— 9
	31	5. 53. 11	5. 7. 41. 22	5. 16. 36 S	+ 21	— 6
June	1	6. 36. 46	5. 20. 36. 38	5. 14. 43 S	+ 23	+ 6
	4	8. 45. 22	6. 27. 52. 58	3. 44. 8 S	+ 17	+ 6
	6	10. 16. 30	7. 22. 15. 33	1. 51. 1 S	+ 8	+ 10
	12	15. 12. 36	10. 7. 40. 38	4. 19. 56 N	— 40	— 6

1751	Days N.S.	Mean Time of Tranſit of ☽'s Limb. H. M. S.	☽'s Longitude obſerved. S. D. M. S.	☽'s Latitude obſerved. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
June	13	15. 59. 40	10. 20. 55. 46	4. 54. 30 N	— 46	+ 12
	14	16. 46. 22	11. 4. 28. 1	5. 13. 26 N	— 43	+ 12
	15	17. 33. 28	11. 18. 19. 46	5. 15. 8 N	— 37	+ 9
	17	19. 12. 50	0. 17. 7. 46	4. 21. 6 N	— 47	+ 16
	18	20. 7. 3	1. 2. 4. 5	3. 25. 39 N	— 42	— 14
	28	4. 31. 37	5. 15. 25. 20	5. 14. 48 S	+ 41	— 12
July	4	8. 59. 40	8. 0. 6. 33	1. 7. 22 S	+ 17	+ 2
	5	9. 48. 36	8. 12. 24. 35	0. 0. 21 S	+ 29	+ 15
	6	10. 38. 34	8. 24. 51. 20	1. 7. 20 N	+ 20	— 22
	8	12. 20. 54	9. 20. 22. 1	3. 12. 8 N	+ 4	— 11
	17	19. 53. 33	1. 26. 28. 50	1. 23. 4 N	— 29	+ 8
	19	21. 55. 39	2. 16. 41. 15	1. 19. 39 S	— 42	in A.R.
	27	3. 52. 58	6. 5. 46. 57	4. 39. 43 S	+ 48	0
Aug.	3	9. 21. 20	9. 2. 29. 41	1. 52. 0 N	+ 7	— 24
	5	11. 1. 22	9. 28. 23. 55	3. 44. 53 N	+ 11	— 3
	8	13. 28. 59	11. 9. 29. 23	5. 2. 59 N	— 8	+ 8
	11	15. 57. 52	0. 22. 32. 43	3. 43. 51 N	— 25	+ 8
	13	17. 47. 48	1. 21. 48. 12	1. 34. 56:: N	— 25	— 6
	14	18. 46. 20	2. 6. 30. 50	0. 18. 5 N	— 36	— 5
	26	4. 0. 27	1. 8. 7. 51	2. 32. 33 S	+ 63	+ 52
	30	7. 12. 24	8. 27. 11. 10	1. 37. 23 N	+ 4	+ 4
Sept.	2	9. 41. 7	10. 5. 54. 38	4. 15. 7 N	— 9	— 20
	3	10. 30. 3	10. 19. 33. 5	4. 45. 36 N	— 7	— 15
	5	12. 9. 10	11. 17. 57. 48	4. 55. 50 N	+ 7	— 7
	6	13. 0. 30	0. 2. 37. 23	4. 32. 20 N	+ 2	+ 4
	7	13. 52. 26	0. 17. 27. 9	3. 50. 26 N	+ 1	+ 4
	8	14. 46. 35	1. 2. 21. 59	2. 52. 30 N	— 14	+ 5
	13	19. 36. 34	3. 15. 48. 51	3. 9. 44 S	— 27	+ 14
	14	20. 30. 40	4. 0. 1. 40	4. 2. 36:: S	— 14	— 60
	29	7. 30. 36	9. 29. 49. 42	4. 8. 44 N	— 7	— 5
Oct.	1	9. 7. 10	10. 26. 47. 19	5. 2. 39 N	— 32	— 13
	2	9. 56. 2	11. 10 57. 59	5. 4. 28 N	— 39	— 8
	3	10. 46. 6	11. 25. 35. 41	4. 46. 59 N	— 41	— 14
	7	14. 32. 22	1. 26. 38. 36	0. 43. 20 N	— 30	+ 5
	10	17. 32. 10	3. 11. 28. 22	3. 5. 29 S	— 27	— 3

1751	Days N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Oct.	11	18. 27. 21	3. 25. 48. 29	4. 0. 55 S	— 34	+ 4
	13	20. 7. 46	4. 23. 31. 41	5. 3. 17 S	+ 14	+ 14
	14	20. 54. 7	5. 6. 58. 20	5. 8. 44 S	+ 14	+ 18
	24	3. 47. 2	8. 9. 29. 54	2. 16. 58 N	+ 4	— 16
	25	4. 35. 53	9. 12. 0. 36	3. 14. 11 N	+ 3	— 21
	26	5. 22. 47	9. 24. 29. 46	4. 3. 3 N	+ 2	— 19
	28	6. 57. 50	10. 20. 24. 33	5. 5. 35 N	— 5	— 8
	29	7. 45. 8	11. 4. 0. 11	5. 14. 28 N	— 29	— 27
	30	8. 32. 7	11. 18. 5. 55	5. 4. 53 N	— 36	— 22
	31	9. 22. 20	0. 2. 42. 42	4. 35. 38 N	— 46	— 13
Nov.	1	10. 15. 23	0. 17. 48. 15	3. 46. 36 N	— 49	— 7
	2	11. 11. 55	1. 3. 16. 49	2. 39. 29 N	— 26	+ 27
	3	12. 14. 24	1. 19. 1. 34	1. 19. 49 N	— 23	+ 14
	7	16. 20. 29	3. 20. 44. 54	3. 51. 52 S	— 18	— 7
	8	17. 14. 49	4. 5. 14. 20	4. 38. 29 S	— 12	— 13
	9	18. 5. 18	4. 19. 16. 50	5. 6. 47 S	— 8	— 14
	10	18. 52. 39	5. 2. 54. 6	5. 16. 41 S	+ 17	— 13
	12	20. 21. 52	5. 29. 7. 34	4. 47. 5 S	+ 6	— 64
	13	21. 5. 34	6. 11. 49. 56::	4. 9. 58 : S	+ 26	— 41
	14	21. 49. 43	6. 24. 21. 28::	3. 21. 55 : S	+ 4	— 57
	27	7. 10. 4	11. 25. 42. 11	4. 55. 7 N	— 2	— 22
	28	7. 59. 49	0. 10. 4. 55	4. 16. 15 N	— 12	— 14
	30	9. 50. 8	1. 10. 19. 10	2. 6. 3 N	— 9	— 28
Dec	2	11. 56. 31	2. 11. 58. 25	0. 46. 0 S	— 12	+ 8
	4	14. 4. 37	3. 13. 33. 39	3. 24. 23 S	+ 13	— 18
	6	15. 57. 26	4. 13. 37. 16	4. 58. 38 S	+ 14	— 27
	9	18. 19. 58	9. 24. 52. 47	4. 56. 1 S	+ 20	— 27
	24	5. 5. 5	11. 20. 34. 41	4. 59. 35 N	+ 3	— 8
	25	5. 52. 6	0. 4. 18. 11	4. 29. 0 N	+ 18	— 18
	31	11. 40. 45	3. 4 52. 34::	2. 44. 4 S	+ 2	— 10
1752 Jan.	1	12. 43. 37	3. 20. 35. 15	3. 49. 35 S	+ 13	— 10
	8	18. 29. 31	6. 28. 23. 33	2. 55. 7 S	+ 10	0
	20	3. 4. 9	11. 16. 29. 45	4. 55. 3 N	+ 23	+ 2
	23	5. 28. 33	0. 27. 52. 48	2. 29. 21 N	+ 29	+ 4
	26	8. 18. 52	2. 11. 53. 57	0. 55. 26 S	+ 32	+ 2
	27	9. 20. 21	2. 27. 7. 34	2. 12. 13 S	+ 14	+ 9

1752	Days, N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Jan.	28	10. 21. 35	3. 12. 29. 45	3. 20. 10 S	− 3	+ 2
	29	11. 20. 55	3. 27. 51. 45	4. 13. 24 S	+ 7	0
Feb.	1	14. 2. 17	5. 12. 28. 30	4. 55. 50 S	− 4	+ 9
	9	20. 19. 48	8. 24. 51. 17	2. 6. 22 N	+ 10	+ 25
	22	6. 11. 33	2. 6. 54. 59	0. 44. 41 S	+ 7	− 16
	23	7. 10. 43	2. 21. 38. 10	1. 59. 6 S	+ 5	+ 3
	25	9. 8. 5	3. 21. 20. 38	4. 1. 8 S	+ 9	+ 4
	26	10. 3. 57	4. 6. 12. 22	4. 39. 24 S	− 11	+ 4
	27	10. 57. 13	4. 20. 56. 53	4. 58. 42 S	− 17	+ 5
	28	11. 48. 3	5. 5. 28. 23	4. 58. 12 S	− 20	+ 12
Mar.	1	13. 26. 49	6. 3. 34. 24	4. 3. 44 S	+ 1	+ 16
	2	14. 13. 51	6. 17. 2. 24	3. 15. 38 S	+ 13	+ 10
	4	15. 48. 5	7. 12. 52. 41	1. 14. 52 S	+ 6	+ 11
	6	17. 23. 56	8. 7. 39. 24	0. 56. 0 N	− 9	− 5
	7	18. 12. 18	8. 19. 51. 58	1. 58. 20 N	− 23	− 9
	9	19. 48. 32	9. 14. 24. 50	3. 44. 20 N	+ 1	+ 9
	11	21. 22. 51	10. 9. 43. 59	4. 51. 15 N	− 10	− 35
	19	3. 9. 3	1. 17. 45. 44	0. 43. 18 N	+ 5	+ 9
	23	7. 2. 22	3. 16. 37. 17	3. 58. 26 S	+ 4	+ 7
	24	7. 57. 38	4. 1. 10. 20	4. 39. 35 S	+ 10	+ 3
	25	8. 50. 20	4. 15. 35. 33	5. 2. 40 S	+ 3	− 6
	27	10. 29. 12	5. 13. 52. 59	4. 51. 44 S	+ 4	+ 6
	28	11. 16. 35	5. 27. 40. 47	4. 20. 15 S	− 5	+ 1
	29	12. 4. 32	6. 11. 12. 33	3. 34. 19 S	− 25	+ 10
	30	12. 52. 32	6. 24. 26. 59	2. 37. 46 S	− 8	+ 11
	31	13. 39. 53	7. 7. 23. 31	1. 34. 17 S	+ 3	− 8
Apr.	2	15. 16. 8	8. 2. 32. 0	0. 4c. 52 N	+ 5	− 1
	5	17. 40. 53	9. 9. 17. 26	3. 57. 59 N	− 36	0
	8	20. 0. 25	10. 16. 54. 35	5. 8. 55 N	− 41	+ 12
	9	20. 46. 26	11. 0. 2. 47	5. 10. 39 N	− 27	+ 14
	10	21. 33. 5	11. 13. 35. 1	4. 5. 33 N	− 24	+ 15
	18	3. 58. 5	2. 27. 8. 34	2. 49. 42 S	+ 24	+ 9
	20	5. 53. 53	3. 26. 49. 37	4. 38. 55 S	+ 9	− 5
	21	6. 47. 18	4. 11. 16. 58	5. 6. 40 S	+ 23	− 3
	22	7. 37. 49	4. 25. 27. 40	5. 14. 54 S	− 4	+ 9
	26	10. 45. 10	6. 19. 31. 14	3. 0. 55 S	+ 14	+ 6

1752	Days N. S.	Mean Time of Tranſit of ☽'s Limb. H. M. S.	☽'s Longitude obſerved. S. D. M. S.	☽'s Latitude obſerved. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Apr.	28	12. 21. 26	7. 15. 9. 53	0. 50. 54 S	+ 10	+ 7
	30	13. 58. 11	8. 10. 4. 19	1. 25. 58 N	+ 10	— 10
May	5	17. 53. 29	10. 11. 34. 32	5. 9. 30 N	— 31	+ 6
	6	18. 38. 28	10. 24. 18. 21	5. 17. 31 N	— 31	+ 17
	7	19. 23. 41	11. 7. 22. 25	5. 9. 34 N	— 11	0
	15	1. 43. 49	2. 20. 33. 48 ::	2. 20. 25 :: S	+ 51	+ 2
	17	3. 45. 49	3. 21. 26. 49	4. 26. 59 S	+ 4	— 23
	18	4. 42. 2	4. 6. 25. 46	5. 3. 9 S	+ 30	— 63
	19	5. 34. 36	4. 20. 59. 39	5. 17. 16 S	+ 44	— 17
	22	7. 57. 29	6. 2. 18. 13	4. 11. 4 S	+ 39	— 7
	23	8. 43. 8	6. 15. 23. 52	3. 20. 35 S	+ 42	+ 9
	24	9. 29. 4	6. 28. 14. 42	2. 21. 1 S	+ 33	— 27
	25	10. 15. 42	7. 10. 53. 15	1. 14. 45 S	+ 29	+ 3
	27	11. 52. 32	8. 5. 44. 52	1. 2. 10 N	+ 26	— 13
	29	13. 30. 26	9. 0. 16. 12	3. 5. 28 N	+ 11	— 11
June	1	15. 49. 43	10. 7. 4. 8	5. 1. 36 N	+ 3	— 7
	3	17. 18. 21	11. 2. 14. 45	5. 12. 33 N	— 30	+ 2
	14	2. 29. 44	3. 29. 50. 25 ::	4. 45. 10 S	+ 86	+ 13
	15	3. 25. 54	4. 15. 6. 34	5. 9. 24 S	+ 78	— 19
	16	4. 18. 21	4. 29. 53. 58	5. 11. 25 S	+ 64	— 10
	18	5. 55. 12	5. 27. 57. 27	4. 19. 50 S	+ 44	— 3
	19	6. 41. 28	6. 11. 17. 53	3. 32. 37 S	+ 45	— 2
	22	9. 0. 44	7. 19. 25. 58	0. 25. 10 S	+ 36	+ 16
	23	9. 48. 28	8. 1. 46. 5	0. 41. 58 N	+ 28	— 19
	25	11. 25. 2	8. 26. 14. 39	2. 45. 53 N	+ 20	— 18
	29	14. 32. 33	10. 15. 29. 7	5. 5. 14 N	+ 11	— 13
July	2	16. 44. 54	11. 23. 47. 51	4. 25. 41 N	— 2	— 23
	5	19. 10. 53	1. 4. 55. 38 :	1. 36. 20 :: N	— 12	+ 35
	20	7. 45. 24	7. 27. 43. 40	0. 28. 31 N	+ 33	— 9
	22	9. 21. 42	8. 22. 13. 2	2. 32. 7 N	+ 21	— 24
	23	10. 9. 43	9. 4. 25. 50	3. 24. 17 N	+ 8	— 32
	26	12. 31. 3	10. 11. 30. 32	4. 56. 48 N	+ 25	— 24
	27	13. 15. 37	10. 24. 6. 1	5. 0. 53 N	+ 29	— 14
	28	13. 59. 46	11. 6. 51. 4	4. 50. 11 N	+ 8	— 9
	29	14. 44. 4	11. 19. 46. 39	4. 24. 41 N	+ 4	— 11

1762	Days, N. S.	Mean Time of Tranſit of ☽'s Limb.	☽'s Longitude obſerved.	☽'s Latitude obſerved.	Error of Tab. in Long.	Error of Tab. in Lat.
		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Aug.	4	19. 52. 46	2. 13. 17. 42	1. 56. 20 S	— 31	— 19
	16	5. 40. 15	7. 23. 7. 46	0. 19. 7 N	+ 30	— 8
	19	8. 5. 6	9. 0. 4. 21	3. 17. 6 N	+ 14	— 18
	23	11. 10. 39	10. 19. 42. 17	5. 0. 51 N	+ 22	— 24
	25	12. 42. 21	11. 15. 33. 22	4. 28. 1 N	+ 24	— 8
	28	15. 3. 20	0. 25. 51. 34	1. 54. 20 N	— 2	0
	30	16. 48. 38	1. 23. 51. 52	0. 31. 44 S	— 12	+ 16
	31	17. 45. 17	2. 8. 15. 27	1. 46. 0 S	— 19	— 7
Sept.	1	18. 43. 47	2. 22. 54. 47	2. 54. 50 S	— 25	— 9
	2	19. 42. 56	3. 7. 48. 31	3. 52. 43 S	— 30	+ 6
	12	3. 32. 3	7. 17. 43. 41	0. 4. 12 N	+ 42	— 7
	16	6. 46. 25	9. 7. 31. 15	3. 58. 13 N	+ 6	— 13
	17	7. 33. 23	9. 19. 46. 41	4. 38. 8 N	— 5	— 17
	19	9. 4. 54	10. 14. 40. 10	5. 7. 2 N	— 12	— 6
	22	11. 20. 47	11. 23. 44. 22	4. 4. 27 N	+ 1	+ 5
	24	12. 59. 3	0. 21. 9. 30	2. 9. 52 N	0	+ 19
	25	13. 50. 30	1. 5. 13. 31	0. 57. 50 N	— 17	+ 6
	27	15. 40. 56	2. 3. 55. 45	1. 36. 7 S	— 33	— 31
	29	17. 37. 16½	3. 3. 11. 4	3. 48. 35 S	— 35	+ 7
	30	18. 34. 49	3. 17. 55. 35	4. 34. 45 S	— 18	+ 9
Oct.	12	3. 50. 33	8. 20. 7. 54	2. 58. 57 N	+ 32	+ 6
	13	4. 38. 56	9. 2. 27. 47	3. 50. 23 N	+ 34	— 9
	16	6. 57. 41	10. 9. 19. 0	5. 13. 20 N	— 10	— 9
	17	7. 42. 20	10. 21. 50. 49	5. 13. 14 N	— 19	— 2
	18	8. 26. 55	11. 4. 38. 54	4. 57. 55 N	— 19	— 6
	20	9. 58. 39	0. 1. 13. 1	3. 40. 18 N	— 21	— 3
	21	10. 47. 15	0. 15. 4. 5	2. 39. 53 N	— 30	— 13
	23	12. 35. 13	1. 13. 49. 30	0. 8. 25 N	— 17	— 3
	24	13. 32. 26	1. 28. 35. 59	1. 12. 50 S	— 18	— 2
	25	14. 31. 37	2. 13. 31. 42	2. 29. 46 S	— 27	+ 8
	27	16. 30. 9	3. 13. 27. 37	4. 29. 10 S	— 22	+ 5
	28	17. 26. 51	3. 28. 17. 46	5. 3. 9 S	— 11	— 6
	29	18. 20. 58	4. 12. 58. 45	5. 16. 45 S	+ 6	— 5
	30	19. 12. 38	4. 27. 26. 20	5. 9. 56 S	+ 39	— 1
	31	20. 2. 24	5. 11. 42. 2	4. 44. 11 S	+ 37	— 1

	Days N. S.	Mean Time of Tranſit of ☽'s Limb.	☽'s Longitude obſerved.	☽'s Latitude obſerved.	Error of Tab. in Long.	Error of Tab. in Lat.
1752		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
					′ ″	′ ″
Nov.	11	4. 6. 4	9. 21. 59. 16	4. 49. 28: N	+ 44:	+1. 51:::
	13	5. 35. 37	10. 16. 31. 2	5. 17. 19 N	+ 15	— 8
	14	6. 19. 22	10. 28. 58. 48	5. 8. 17 N	+ 4	— 8
	15	7. 3. 17	11. 11. 41. 39	4. 44. 27 N	0	— 15
	16	7. 48. 11	11. 24. 44. 45	4. 5. 22 N	— 1	— 15
	19	10. 17. 21	1. 6. 32. 13	0. 48. 49 N	— 23	— 12
	20	11. 13. 57	1. 21. 23. 10	0. 33. 52 S	— 20	— 10
	21	12. 16. 11	2. 6. 37. 33	1. 54. 55 S	— 15	+ 7
	25	16. 15. 59	4. 8. 8. 52	5. 13. 3 S	— 12	— 6
	26	17. 9. 32	4. 22. 58. 49	5. 12. 32 S	+ 2	— 12
	29	19. 36. 54	6. 5. 17. 34	3. 22. 38 S	+ 42	— 21
	30	20. 24. 18	6. 18. 44. 23	2. 20. 48 S	+ 48	— 20
Dec.	12	4. 57. 54	11. 6. 31. 20	4. 49. 2 N	+ 19	— 11
	13	5. 41. 13	11. 19. 8. 4	4. 16. 54 N	+ 14	— 15
	14	6. 25. 42	0. 2. 2. 51	3. 31. 1 N	+ 28	— 16
	16	8. 1. 57	0. 29. 8. 58	1. 23. 25 N	+ 25	— 15
	19	10. 53. 54	2. 13. 43. 58	2. 30. 35 S	— 5	+ 25
	20	11. 58. 4	2. 29. 29. 2	3. 38. 8 S	+ 5	+ 8
	21	13. 2. 2	3. 15. 24. 21	4. 29. 24 S	+ 12	+ 6
	22	14. 2. 38	4. 1. 15. 38	4. 59. 54 S	+ 6	— 10
	23	15. 0. 0	4. 16. 50. 55	5. 7. 13 S	+ 10	— 8
	26	17. 34. 29	6. 0. 54. 28	3. 20. 28 S	— 13	— 18
	27	18. 22. 34	6. 14. 37. 33	2. 31. 9 S	— 2	— 22
1753 Jan.	17	10. 36. 27	3. 6. 30. 53	4. 5. 9 S	+ 13	+ 7
	23	16. 16. 25	6. 9. 16. 19	2. 40. 7 S	— 17	+ 12
	26	18. 43. 31	7. 19. 32. 42	0. 43. 57 N	— 32	+ 9
Feb.	9	4. 38. 17	1. 2. 8. 55	0. 37. 40 N	— 21	+ 16
	15	10. 18. 32	3. 29. 52. 36	4. 58. 11 S	— 5	— 2
	16	11. 17. 8	4. 15. 40. 53	4. 59. 31 S	— 25	+ 11
	21	15. 45. 51	7. 0. 44. 33	0. 39. 18 S	— 6	+ 7
	25	19. 5. 0	8. 22. 41. 31	3. 34. 44 N	— 27	— 19
Mar.	8	2. 36. 34	0. 28. 7. 46	0. 46. 57 N	— 19	+ 20
	9	3. 26. 6½	1. 11. 33. 22	0. 25. 2 S	— 37	— 8
	10	4. 18. 14	1. 25. 14. 48	1. 37. 34 S	— 12	— 28

1753	Days, N. S.	Mean Time of Tranſit of ☽'s Limb. H. M. S.	☽'s Longitude obſerved. S. D. M. S.	☽'s Latitude obſerved. D. M. S.		Error of Tab. in Lat. S.	Error of Tab. in Long. S.
Mar.	12	6. 9. 32	2. 23. 34. 8	3. 45. 29	S	— 2	— 12
	13	7. 6. 23	3. 8. 13. 31	4. 31. 46	S	— 22	— 2
	15	9. 2. 14	4. 8. 22. 55	5. 9. 21	S	+ 2	— 5
	18	11. 45. 35	5. 24. 14. 14	3. 28. 43	S	+ 7	— 10
	19	12. 40. 16	6. 9. 10. 13	2. 22. 24	S	+ 24	+ 5
	21	14. 24. 6	7. 7. 48. 17	0. 8. 5	N	— 6	— 17
	24	16. 57. 12	8. 17. 33. 57	3. 26. 8	N	+ 20	+ 13
	26	18. 34. 22	9. 12. 32. 34	4. 45. 37	N	— 46	+ 38
Apr.	11	6. 55. 18	4. 3. 10. 33	5. 15. 47	S	— 19	— 6
	15	10. 26. 14	6. 2. 23. 59	2. 55. 29	S	+ 19	— 7
	17	12. 10. 14	7. 1. 6. 34	0. 26. 48	S	+ 23	— 27
	19	13. 55. 9	7. 28. 34. 53	2. 2. 1	N	+ 25	+ 11
	21	15. 37. 19	8. 24. 42. 10	3. 58. 38	N	+ 22	— 5
	22	16. 26. 30	9. 7. 19. 48	4. 38. 28	N	+ 23	— 2
	23	17. 14. 1	9. 19. 45. 31	5. 4. 31	N	+ 3	+ 2
	26	19. 27. 54	10. 26. 36. 47	4. 56. 56	N	— 38	— 11
May	6	2. 56. 15	2. 29. 0. 6	4. 13. 12	S	+ 11	— 17
	7	3. 54. 29	3. 13. 51. 53	4. 53. 20	S	+ 2	— 12
	9	5. 46. 16	4. 13. 34. 32	5. 13. 30	S	— 4	0
	10	6. 39. 8	4. 28. 17. 6	4. 52. 40	S	— 11	0
	11	7. 30. 24	5. 12. 51. 22	4. 13. 2	S	+ 42	+ 4
	12	8. 20. 40	5. 27. 15. 30	3. 18. 16	S	+ 53	— 17
	14	10. 0. 52	6. 25. 29. 2	0. 57. 46	S	+ 43	— 3
	15	10. 51. 39	7. 9. 16. 41	0. 17. 52	N	+ 17	+ 10
	16	11. 43. 0	7. 22. 50. 8	1. 31. 28	N	— 13	— 1
	22	16. 38. 42	10. 9. 19. 41	5. 12. 54	N	+ 2	— 3
	23	17. 22. 29	10. 21. 34. 20	5. 1. 33	N	— 17	+ 2
	24	18. 5. 27	11. 3. 51. 7	4. 36. 33	N	— 24	— 1
	25	18. 48. 20	11. 16. 15. 20	3. 58. 22	N	+ 37	— 40
	26	19. 31. 57	11. 28. 52. 52	3. 8. 4	N	— 30	+ 3
June	4	2. 43. 24	3. 23. 20. 51	5. 3. 27	S	+ 41	— 13
	7	5. 27. 55	5. 8. 28. 49	4. 19. 31	S	+ 19	0
	8	6. 18. 35	5. 22. 58. 34	3. 28. 53	S	— 26	+ 3
	9	7. 8. 14	6. 7. 9. 52	2. 26. 18	S	— 18	— 8
	10	7. 57. 38	6. 21. 3. 57	1. 16. 3	S	+ 41	— 3
	11	8. 47. 18	7. 4. 42. 29	0. 2. 54	S	+ 29	+ 1

1753	Days, N.S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
June	12	9. 37. 30	7. 18. 7. 7	1. 9. 40 N	+ 23	— 45
	18	14. 34. 9	10. 4. 39. 3	5. 5. 45 N	+ 1	— 26
	19	15. 18. 26	10. 16. 54. 16	4. 58. 29 N	+ 10	— 19
	21	16. 44. 2	11. 11. 21. 57	4. 4. 13 N	+ 18	— 18
	23	18. 10. 12	0. 6. 17. 55	2. 23. 18 N	— 16	+ 2
	24	18. 55. 33	0. 19. 10. 18	1. 19. 20 N	— 9	+ 1
	26	20. 34. 58	1. 16. 12. 40	1. 4. 2 S	— 23	— 19
July	2	1. 28. 5	4. 1. 55. 52	5. 2. 8 S	+ 46	+ 15
	5	4. 14. 8	5. 18. 1. 57	3. 35. 31 S	+ 42	— 22
	6	5. 5. 18	6. 2. 38. 56	2. 33. 58 S	+ 30	+ 12
	7	5. 55. 26	6. 16. 49. 54	1. 25. 32 S	+ 20	— 4
	8	6. 45. 13	7. 0. 37. 17	0. 13. 17 S	+ 18	+ 7
	9	7. 35. 3	7. 14. 4. 7	0. 57. 32 N	+ 22	0
	10	8. 25. 9	7. 27. 14. 21	2. 3. 51 N	+ 5	— 3
	12	10. 5. 17	8. 22. 55. 43	3. 51. 6 N	+ 9	— 15
	13	10. 54. 28	9. 5. 31. 45	4. 27. 8 N	— 13	— 2
	15	12. 30. 59	10. 0. 22. 57	4. 59. 53 N	— 6	— 32
	17	13. 59. 23	10. 24. 53. 7	4. 36. 36 N	0	— 28
	19	15. 24. 18	11. 19. 20. 8	3. 22. 54 N	+ 11	— 30
	23	18. 24. 53	1. 10. 14. 9	0. 46. 40 S	+ 4	— 22
	25	20. 11. 55	2. 8. 6. 35	3. 0. 54 S	— 39	— 17
	26	21. 10. 17	2. 22. 52. 38	3. 56. 38 S	— 47	— 36
Aug.	9	8. 51. 44	9. 1. 35. 20	4. 25. 42 N	— 14	— 30
New	11	10. 26. 34	9. 26. 22. 51	5. 1. 5 N	— 19	— 31
Qua-	16	14. 6. 1	11. 27. 41. 59	2. 37. 19 N	+ 2	+ 14
drant	18	15. 33. 48	0. 22. 43. 34	0. 31. 51 N	+ 1	+ 2
	19	16. 20. 24	1. 5. 34. 30	0. 36. 48 S	— 5	— 1
	20	17. 9. 36	1. 18. 45. 6	1. 45. 3 S	— 12	— 4
	21	18. 1. 44½	2. 2. 20. 16	2. 49. 49 S	— 16	— 10
	24	20. 53. 59	2. 16. 3. 34	4. 59. 23 S	— 49	— 8
	25	21. 52. 33	4. 1. 33. 3	5. 5. 32 S	— 60	— 31
Sept.	7	8. 23. 46½	9. 22. 19. 19	5. 7. 54 N	+ 3	— 31
	10	10. 37. 16	10. 29. 3. 58	4. 23. 50 N	— 15	— 20
	14	13. 32. 37	0. 18. 48. 1	0. 45. 17 N	— 13	— 7
	15	14. 18. 41	1. 1. 36. 4	0. 24. 33 S	— 27	— 11
	17	15. 57. 27	1. 27. 56. 23	2. 40. 43 S	— 30	— 16

	Days N. S.	Mean Time of Transit of ☽'s Limb.	☽'s Longitude observed.	☽'s Latitude observed.	Error of Tab. in Long.	Error of Tab. in Lat.
1753		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Sept.	18	16. 50. 27	2. 11. 34. 43	3. 39. 43 S	— 35	— 18
	19	17. 45. 30	2. 25. 35. 17	4. 27. 16 S	— 36	— 11
	20	18. 41. 56	3. 9. 59. 32	4. 59. 40 S	— 37	— 12
	21	19. 38. 55	3. 24. 47. 18::	5. 14. 23 S	— 44::	— 72
Oct.	1	3. 48. 30	8. 9. 2. 33	3. 32. 14 N	+ 39	— 3:
	2	4. 40. 16	8. 22. 17. 15	4. 20. 9 N	+ 39	- 1
	4	6. 18. 48	9. 17. 45. 25	5. 12. 11 N	+ 18	— 10
	5	7. 5. 19	10. 0. 8. 25	5. 15. 50 N	+ 8	— 19
	6	7. 50. 14	10. 12. 24. 14	5. 5. 1 N	— 8	— 18
	7	8. 33. 55	10. 24. 37. 26	4. 40. 18 N	— 14	— 14
	8	9. 16. 53½	11. 6. 52. 38	4. 2. 44 N	— 17	— 10
	10	10. 43. 3	0. 1. 42. 52	2. 14. 49 N	— 19	— 4
	11	11. 27. 26	0. 14. 23. 10	1. 8. 35 N	— 10	— 8
	13	13. 3. 46	1. 10. 24. 54	1. 14. 40 S	— 7	— 6
	14	13. 54. 14	1. 23. 47. 24	2. 24. 2 S	— 16	— 2
	15	14. 46. 55	2. 7. 25. 27	3. 26. 42 S	— 22	— 5
	16	15. 41. 23	2. 21. 19. 15	4. 18. 28 S	— 35	— 6
	19	18. 27. 53	4. 4. 29. 22	5. 14. 29 S	— 4	+ 2
	30	3. 20. 29	8. 28. 29. 27	4. 40. 22 N	+ 6	+ 68
	31	4. 10. 39	9. 12. 26. 20	5. 7. 0 N	+ 15	— 14
Nov.	2	5. 44. 38	10. 7. 29. 16	5. 11. 9 N	+ 15	— 8
	4	7. 12. 1	11. 1. 58. 0	4. 18. 59 N	— 6	— 13
	5	7. 54. 39	11. 14. 13. 9	3. 34. 38 N	— 20	— 20
	8	10. 6. 51	0. 22. 1. 45	0. 26. 48 N	— 5	— 13
	10	11. 46. 3½	1. 18. 40. 55	1. 57. 12 S	+ 1	+ 9
	11	12. 40. 12	2. 2. 30. 7	3. 3. 43 S	— 4	+ 3
	13	14. 31. 49½	3. 0. 57. 23	4. 42. 31 S	— 16	+ 11
	16	17. 18. 38	4. 14. 47. 42	4. 57. 41 S	— 6	+ 5
	18	19. 3. 27	5. 14. 8. 49	3. 31. 29 S	+ 6	+ 2
	19	19. 54. 45	5. 28. 45. 8	2. 26. 19 S	+ 28	— 6
	20	20. 46. 7	6. 13. 16. 54::	1. 12. 11 S	+ 26::	— 16
	21	21. 38. 5	6. 27. 42. 23	0. 7. 27:: N	+ 87	— 52::
	29	3. 37. 28½	10. 2. 12. 23	5. 7. 51 N	— 1	— 6
	30	4. 22. 50	10. 14. 37. 1	4. 53. 31 N	— 14	— 12
Dec.	2	5. 49. 10	11. 9. 3. 55	3. 46. 2 N	+ 1	— 12
	3	6. 31. 29	11. 21. 16. 57	2. 56. 7 N	+ 2	— 21

	Days. N. S.	Mean Time of Tranſit of ☽'s Limb.	☽'s Longitude obſerved.	☽'s Latitude obſerved.	Error of Tab. in Long.	Error of Tab. in Lat.
1753		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Dec.	6	8. 44. 36½	0.29. 7. 38::	0. 17. 33 S	— 15::	+ 12
	7	9. 33. 32	1. 12. 25. 30	1. 27. 51 S	+ 6	+ 24
	8	10. 25. 35	1. 26. 9. 48	2. 35. 22 S	+ 17	+ 24
	9	11. 20. 39	2. 10. 20. 45	3. 35. 22 S	+ 4	+ 21
	17	18. 43. 11	6. 8. 49. 22	1. 24. 51 S	+ 18	— 14
	29	3. 44. 38	11. 4. 8. 58	3. 50. 21 N	— 33	— 24
	30	4. 26. 52	11. 16. 17. 55	3. 2. 54 N	— 15	— 9
	31	5. 8. 58	11. 28. 28. 4	2. 7. 46 N	— 5	— 14
1754						
Jan.	2	6. 35. 55	0. 23. 16. 10	0. 0. 34 N	— 11	— 33
	3	7. 22. 24	1. 6. 6. 36	1. 7. 18 S	+ 4	— 6
	5	9. 4. 36	2. 3. 9. 52	3. 14. 11 S	+ 1	+ 11
	6	10. 0. 34½	2. 17. 29. 1	4. 5. 1 S	— 11	+ 3
	7	10. 58. 59½	3. 2. 18. 39	4. 41. 21 S	+ 12	+ 18
	8	11. 58. 33	3. 17. 33. 13	4. 59. 5 S	+ 18	+ 11
	9	13. 0. 10	4. 3. 4. 35	4. 55. 3 S	+ 31	+ 10
	11	14. 53. 40½	5. 4. 7. 0	3. 43. 53 S	+ 1	+ 7
	17	20. 5. 48	8. 0. 17. 40	3. 7. 56 N	— 21	+ 5
	18	20. 57. 24½	8. 13. 36. 46	3. 57. 25 N	— 17	— 16 :
	26	2. 24. 4	11. 11. 49. 0	3. 8. 5 N	— 24	+ 23::
	30	5. 15. 44	1. 0. 48. 58	0. 56. 33 S	— 25	— 1
	31	6. 2. 29	1. 13. 34. 10	2. 1. 22 S	— 14	0
Feb.	3	8. 40. 27	2. 24. 35. 44::	4. 34. 53 S	+ 22::	0
	4	9. 38. 26	3. 9. 22. 40	4. 58. 45 S	— 9	+ 7
	5	10. 37. 37	3. 24. 39. 57	5. 2. 41 S	— 5	+ 2
	6	11. 36. 46	4. 10. 19. 51	4. 44. 20 S	+ 3	+ 1
	13	18. 2. 18	7. 26. 1. 49	3. 4. 59 N	— 54	— 10
	18	22. 11. 54½	10. 0. 52. 43::	5. 0. 7 N	— 22::	+ 3
	28	4. 45. 59	1. 21. 48. 13	2. 53. 32 S	— 41	— 10
Mar.	1	5. 35. 56	2. 4. 54. 9	3. 47. 56 S	— 23	— 14
	2	6. 28. 30	2. 18. 26. 3	4. 31. 37 S	— 22	— 13
	3	7. 23. 21	3. 2. 27. 20	5. 0. 50 S	— 17	— 9
	4	8. 19. 56	3. 17. 0. 7	5. 12. 19 S	— 17	— 6
	5	9. 17. 25	4. 2. 3. 15	5. 3. 7 S	— 26	— 9
	6	10. 15. 3	4. 17. 32. 7	4. 31. 52 S	— 31	— 1
	7	11. 12. 15	5. 3. 18. 10	3. 39. 44 S	— 12	0
	9	13. 7. 9½	6. 4. 59. 25	1. 9. 18 S	+ 25	+ 10

1754	Days. N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Mar.	28	3. 32. 26	2. 0.41.18::	3. 37. 21::S	— 47::	— 11::
	31	6. 10. 23½	3. 11. 21. 37	5. 15. 53 S	— 16	— 18
Apr.	2	8. 0. 48½	4. 10. 26. 10	4. 52. 45 S	— 23	+ 1
	3	8. 56. 9	4. 25. 33. 6	4. 10. 41 S	— 21	— 2
	4	9. 51. 24	5. 10. 57. 32	3. 9. 46 S	— 22	+ 4
	5	10. 46. 40	5. 26. 32. 28	1. 54. 13 S	— 8	+ 6
	7	12. 40. 27	6. 27. 39. 7	0. 55. 49N	+ 39	+ 3
	8	13. 36. 45	7. 12. 51. 10	2. 16. 13N	+ 41	— 13
	12	17. 14. 38	9. 9. 14. 47	5. 14. 28N	+ 5	— 8
	14	18. 51. 36		A.R.	— 15	
	28	5. 0. 26	3. 21. 3. 55	5. 14. 24 S	+ 23	+ 3
	30	6. 48. 8	4. 19. 54. 55	4. 26. 14 S	+ 14	— 8
May	1	7. 41. 24½	5. 4. 42. 22	3. 34. 5 S	+ 21	+ 3
	2	8. 34. 36	5. 19. 41. 55	2. 26. 51 S	+ 4	+ 8
	3	9. 28. 8	6. 4. 50. 7	1. 8. 52 S	0	+ 7
	4	10. 22. 27	6. 20. 1. 59	0. 14. 7N	— 2	— 10
	5	11. 17. 45	7. 5. 10. 56	1. 36. 2N	+ 5	— 14
	6	12. 15. 6	7. 20. 10. 44	2. 50. 22N	+ 12	— 24
	17	21. 6. 56	0. 13. 39. 1	0. 19. 33N	— 32	— 47
				A.R.	— 11	
	18	21. 51. 12		A.R.	— 13	
	28	5. 37. 43	5. 0. 5. 7	3. 42. 43 S	+ 21	— 4
	30	7. 21. 41	5. 29. 26. 15	1. 29. 32 S	0	— 1
	31	8. 13. 57	6. 14. 10. 58	0. 11. 18 S	+ 25	+ 5
June	2	10. 1. 25	7. 13. 37. 42	2. 21. 24N	+ 5	0
	3	10. 56. 44	7. 28. 12. 33	3. 25. 16N	— 8	— 13
	5	12. 49. 57	8. 26. 43. 9	4. 47. 43::N	— 7	+ 8::
	6	13. 43. 36	9. 10. 28. 49	5. 3. 22N	— 11	— 11
	14	19. 45. 14½	0. 20. 57. 10	0. 30. 47: S	— 31	— 1:
	24	3. 34. 16	4. 25. 32. 31	3. 46. 35 S	+ 33	— 17
	29	7. 55. 31	7. 8. 37. 58	2. 7. 5N	+ 18	— 5
July	2	10. 37. 48	8. 21. 2. 50	4. 38. 16N	— 21	— 20
	4	12. 25. 51	9. 18. 16. 29	4. 59. 21N	— 19	— 17
	13	19. 9. 9	1. 10. 43. 43	2. 24. 35 S	— 11	+ 11
	22	2. 20. 30	5. 4. 53. 12	2. 59. 41::S	+ 12	— 3::

1754	Days, N. S.	Mean Time of Tranfit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
July	25	5. 0. 4½	6. 19. 49. 9	0. 46. 12 N	+ 4	+ 13
	31	10. 17. 34	9. 13. 27. 27	5. 3. 30 N	— 15	— 11
Aug.	1	11. 7. 46	9. 26. 35. 16	4. 52. 13 N	— 27	— 18
	2	11. 55. 57½	10. 9. 28. 55	4. 26. 6 N	— 34	— 26
	3	12. 44. 14	10. 22. 10. 1	3. 46. 52 N	— 25	— 21
	4	13. 28. 36½	11. 4. 37. 35	2. 57. 16 N	— 15	— 16
	8	16. 19. 6	0. 23. 23. 3	1. 12. 18 S	— 6	+ 16
	9	17. 3. 13	1. 5. 40. 20	2. 14. 39 S	— 12	+ 11
	10	17. 49. 13	1. 18. 11. 13	3. 11. 50 S	— 20	+ 5
	13	20. 22. 13	2. 28. 1. 43	5. 1. 55 S	— 39	+ 11
	14	21. 17. 52	3. 12. 17. 10	5. 7. 36 S	— 30	+ 28
	21	2. 52. 30	6. 14. 10. 43	0. 26. 55 N	+ 43	+ 28
	23	4. 41. 10	7. 13. 59. 20	2. 58. 12 N	+ 20	+ 4
	25	6. 29. 15	8. 12. 20. 37	4. 38. 19 N	+ 6	+ 4
	26	7. 22. 23	8. 25. 59. 55	5. 3. 49 N	+ 12	— 13
	27	8. 14. 16	9. 9. 20. 46	5. 11. 59 N	+ 13	— 14
	28	9. 4. 29	9. 22. 25. 20	5. 3. 38 N	0	— 17
	30	10. 39. 12	10. 17. 53. 0	4. 3. 6 N	— 22	— 22
	31	11. 23. 55	11. 0. 20. 13	3. 14. 57 N	— 40	— 21
Sept.	1	12. 8. 19	11. 12. 38. 50	2. 18. 4 N	— 17	— 20
	2	12. 51. 53	11. 24. 51. 28	1. 15. 18 N	— 17	— 24
	4	14. 16. 42	0. 19. 7. 45	0. 57. 23 S	— 16	+ 14
	5	15. 0. 6	1. 1. 18. 41	2. 1. 40 S	— 10	+ 9
	6	15. 44. 53	1. 13. 37. 8	3. 1. 9 S	— 6	+ 3
	8	17. 20. 18	2. 8. 56. 26	4. 34. 30 S	— 14	— 2
	11	19. 59. 5	3. 19. 52. 2	5. 10. 0 S	— 41	+ 5
	12	20. 54. 49		A.R.	+ 52::	
	21	4. 22. 7	8. 7. 16. 47	4. 31. 35 N	+ 38	— 6
	22	5. 16. 59	8. 21. 24. 0	5. 3. 35 N	+ 24	— 11
	23	6. 10. 14	9. 5. 4. 15	5. 17. 15 N	+ 22	— 18
	24	7. 1. 26	9. 18. 20. 19	5. 13. 10 N	+ 19	— 9
	25	7. 50. 25	10. 1. 15. 46	4. 53. 19 N	+ 18	— 9
	26	8. 37. 14½	10. 13. 54. 37	4. 19. 35 N	+ 9	— 9
	27	9. 22. 13	10. 26. 20. 54	3. 34. 5 N	— 2	— 16
	28	10. 5. 46	11. 8. 38. 8	3. 39. 2 N	— 10	— 10
	29	10. 48. 25	11. 20. 49. 38	1. 37. 12 N	— 15	— 10
	30	11. 30. 41½	0. 2. 58. 20	0. 31. 9 N	— 7	— 9

1754	Days, N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Oct.	1	12. 15. 12	0. 15. 8. 9	0. 36. 23 S	— 5	+ 10
	3	13. 42. 48	1. 9. 36. 55	2. 44. 15 S	— 5	+ 6
	6	16. 5. 55	2. 17. 31. 0	4. 56. 45 S	— 11	— 10
	7	16. 57. 3	3. 0. 40. 59	5. 14. 48 S	— 3	— 7
	9	18. 42. 53	3. 28. 8. 52	4. 59. 28 S	+ 2	— 16
	10	19. 36. 51	4. 12. 31. 27	4. 23. 28 S	— 9	+ 3
	20	4. 0. 59	8. 29. 33. 10	5. 12. 28 N	+ 33	— 7
	21	4. 54. 40	9. 13. 21. 41	5. 15. 8 N	+ 25	— 14
	22	5. 45. 40	9. 26. 41. 23	5. 0. 27 N	+ 21	— 14
	23	6. 33. 57	10. 9. 36. 14	4. 30. 46 N	+ 18	— 11
	24	7. 19. 50½	10. 22. 11. 21	3. 48. 43 N	+ 21	— 25
	26	8. 46. 43	11. 16. 44. 27	1. 57. 12 N	+ 5	— 5
	28	10. 11. 17	0. 11. 0. 54	0. 13. 45 S	— 2	+ 6
	29	10. 54. 15	0. 23. 12. 50	1. 19. 54 S	+ 12	+ 12
Nov.	5	16. 37. 45	3. 23. 29. 17	5. 0. 29 S	+ 9	+ 2
	6	17. 30. 9	4. 7. 21. 35	4. 31. 49 S	+ 19	— 1
	7	18. 22. 30	4. 21. 32. 32	3. 46. 3 S	+ 24	— 6
	8	19. 14. 54		A.R.	+ 17	
	10	21. 1. 22	6. 6. 1. 58	0. 10. 28 S	— 1	— 2
	11	21. 56. 19		A.R.	— 10	
	18	3. 35. 36	9. 20. 50. 37	4. 59. 58 N	0	— 4
	19	4. 26. 32	10. 4. 16. 53	4. 35. 8 N	0	— 9
	20	5. 14. 31	10. 17. 16. 3	3. 56. 35 N	+ 8	— 7
	21	5. 59. 58	10. 29. 53. 6	3. 7. 31 N	+ 2	— 6
	24	8. 8. 15	0. 6. 32. 40	0. 3. 45 N	— 2	— 13
	26	9. 34. 28	1. 0. 58. 40	2. 3. 51 S	— 3	+ 13
	27	10. 19. 42	1. 13. 25. 45	3. 1. 24 S	+ 13	+ 10
	28	11. 6. 53	1. 26. 6. 29	3. 50. 40 S	+ 24	+ 17
	29	11. 56. 7	2. 9. 2. 15	4. 29. 9 S	+ 33	+ 16
	30	12. 49. 22	2. 22. 14. 22	4. 54. 1 S	+ 50	+ 18
Dec.	1	13. 41. 42	3. 5. 40. 29	5. 3. 8. S	+ 24	+ 21
	9	20. 39. 57	7. 0. 2. 11	2. 4. 52 N	+ 6	— 4
	17	3. 5. 11½	10. 11. 22. 41	4. 2. 17 N	— 30	+ 6
	18	3. 52. 49	10. 24. 24. 38	3. 15. 23 N	— 20	— 2
	19	4. 38. 0	11. 7. 4. 20	2. 19. 53 N	— 3	— 10
	20	5. 21. 26½	11. 19. 27. 25	1. 18. 50 N	— 4	— 13
	26	9. 47. 48	2. 3. 39. 40	4. 19. 31 S	+ 16	+ 26
	28	11. 31. 2½	3. 0. 20. 28	4. 59. 37 S	+ 33	+ 23

1755	Days N. S.	Mean Time of Tranſit of ☽'s Limb. H. M. S.	☽'s Longitude obſerved. S. D. M. S.	☽'s Latitude obſerved. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Jan.	3	16. 51. 44	5. 26. 1. 46	0. 35. 45 S	— 7	+ 6
	15	2. 30. 34½	11. 1. 29. 9	2. 32. 29 N	— 52	+ 5
	17	3. 58. 37	11. 26. 30. 59	0. 26. 12 N	— 33	— 4
	22	7. 38. 16	1. 27. 54. 30	4. 15. 38 S	— 31	+ 17
	23	8. 27. 12½	2. 10. 46. 39	4. 46. 41 S	— 8	+ 13
	24	9. 18. 31	2. 24. 2. 21	5. 3. 20 S	+ 1	+ 18
	27	12. 2. 46½	4. 6. 17. 16	4. 8. 57 S	+ 26	+ 15
	31	15. 39. 25	6. 5. 52. 20	0. 29. 54 N	— 10	+ 2
Feb.	1	16. 32. 18	6. 20. 43. 54	1. 48. 9 N	— 28	— 9
	2	17. 25. 32½	7. 5. 27. 17	2. 58. 26 N	— 27	— 8
	3	18. 19. 28	7. 20. 1. 17	3. 56. 33 N	— 30	— 14
	18	5. 30. 48	1. 22. 35. 58	4. 10. 48 S	— 30	+ 8
Mar.	17	3. 26. 23	1. 18. 2. 12	3. 58. 56 S	— 31	+ 8
	22	7. 31. 42	3. 22. 11. 46	4. 53. 23 S	— 30	— 22
	23	8. 24. 54	4. 6. 10. 47	4. 14. 47 S	— 25	— 9
	25	10. 13. 17	5. 5. 36. 20	2. 8. 28 S	— 14	— 14
	28	13. 2. 44	6. 22. 24. 25	2. 4. 35 N	+ 44	— 2
	29	14. 0. 3	7. 8. 7. 56	3. 19. 6 N	+ 54	— 6
Apr.	16	3. 44. 11	2. 21. 10. 6	5. 11. 40 S	— 4	— 65
	17	4. 33. 41	3. 3. 56. 53	5. 12. 40 S	— 12	— 17
	18	5. 24. 8	3. 17. 0. 15	4. 58. 37 S	0	— 24
	19	6. 15. 22	4. 0. 24. 19	4. 27. 58 S	+ 8	— 17
	20	7. 7. 9	4. 14. 12. 22	3. 41. 14 S	+ 11	— 17
	22	8. 52. 25	5. 13. 10. 24	1. 25. 40 S	— 13	— 8
	25	11. 38. 31	6. 29. 40. 48	2. 39. 37 N	+ 10	— 8
	26	12. 39. 24	7. 15. 34. 23	3. 46. 45 N	+ 40	— 9
May	3	19. 4. 18	10. 26. 21. 19	2. 45. 40 N	— 10	— 9
	4	19. 49. 17	11. 8. 57. 49	1. 44. 9 N	— 12	— 3
	17	5. 2. 7½	4. 9. 26. 34	3. 47. 27 S	+ 34	— 7
	18	5. 52. 51½	4. 23. 10. 15	2. 52. 30 S	+ 32	— 10
	19	6. 43. 46	5. 7. 15. 2	1. 45. 30 S	+ 31	— 6
	20	7. 35. 16	5. 21. 43. 17	0. 30. 19 S	+ 13	— 11
	22	9. 22. 10	6. 21. 50. 12	2. 6. 35 N	— 25	— 1
	23	10. 18. 33	7. 7. 22. 15	3. 16. 23 N	— 22	— 18
	26	13. 19. 47	8. 24. 12. 15	5. 2. 36 N	+ 32	— 15

1755	Days. N. S.	Mean Time of Tranſit of ☽'s Limb. H. M. S.	☽'s Longitude obſerved. S. D. M. S.	☽'s Latitude obſerved. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
May	27	14. 18. 51	9. 9.15.29	4.55.40 N	+ 36	— 14
	28	15. 15. 23	9.23.48.30	4.29.41 N	+ 24	— 19
	29	16. 8. 37	10. 7.48.24	3.48. 0 N	+ 16	— 14
June	1	18. 30. 2	11.16.55. 0	0.49.40 N	— 11	+ 7
	2	19. 13. 11	11.29.17. 5	0.15.51 S	— 19	— 9
	3	19. 55. 39	0.11.29.22	1.19.45 S	— 18	— 10
	16	5. 31. 6	5.16.53.49	0.41. 2 S	+ 31	— 8
	19	8. 7. 3	7. 0.49.10	2.58.45 N	+ 5	— 5
	20	9. 2. 41	7.15.59. 9	3.56.13 N	— 16	— 15
	21	10. 0. 28	8. 1.18.10	4.36.38 N	+ 32	+ 19
	24	12. 59. 54	9.16.42.42	4.37.42 N	— 1	— 26
	25	13. 55. 40	10. 1.10.22	3.59.38 N	+ 5	— 22
July	4	20. 47. 0	1.25.44. 5	4.28.53 S	— 5	+ 24
	14	4. 19. 39	5.26.56.36	0.26. 8 N	+ 14	+ 11
	15	5. 10. 36½	6.11.23. 7	1.41.38 N	+ 16	+ 16
	18	7. 51. 11	7.25.33.53	4.34.20 N	+ 11	— 2
	20	9. 45. 59	8.25.20. 4	5. 5.24 N	— 5	— 14
	24	13. 27. 37	10.22.31.13	2.28.25 N	— 6	— 24
	25	14. 16. 1	11. 5.53.57	1.21.46 N	— 1	— 23
	30	17. 56. 20	1. 8.29.24	3.47.55 S	— 7	+ 23
	31	18. 40. 53½	1.20.43.41	4.27.27 S	— 2	+ 11
Aug.	14	5. 47. 7	7.21. 4. 0	4.32.43 N	+ 8	+ 22
	15	6. 42. 41	8. 5.45.35	5. 3. 9 N	+ 21	+ 7
	16	7. 39. 5	8.20.21.17	5.13.38 N	+ 18	— 2
	17	8. 35. 33	9. 4.48.21	5. 4. 3 N	+ 11	— 4
	18	9. 31. 10	9.19. 3.46	4.35.59 N	+ 10	— 24
	19	10. 25. 3	10. 3. 4.55	3.51.29 N	— 8	— 25
	21	12. 6. 59	11. 0.16.20	1.48.18 N	— 19	— 27
	22	12. 55. 1	11.13.25. 6	0.38. 5 N	— 15	— 20
	24	14. 24. 11	0. 8.52.13	1.40.35 S	+ 8	+ 21
	27	16. 35. 3		A.R.	+ 10	
Sept.	13	6. 31. 14½	9. 0.28.11	5.12.25 N	+ 31	0
	14	7. 26. 39	9.14.39.33	4.49.36 N	+ 28	— 24
	15	8. 20. 17	9.28.32.54	4. 9.48 N	+ 29	— 27
	16	9. 11. 44½	10.12. 8.51	3.16.45 N	+ 14	— 25

1755	Days, N. S.	Mean Time of Transit of ☽'s Limb.	☽'s Longitude observed.	☽'s Latitude observed.	Error of Tab. in Long.	Error of Tab. in Lat.
		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Sept.	17	10. 0.55	10.25.28.12	2.13.50 N	+ 4	— 14
	18	10.48. 0	10. 8.32.27	1. 5.12 N	— 6	— 21
	27	17.35.58	3. 0.21.54	5.11.23 S	+ 27	— 1
	29	19.16. 0	3.26.15. 9	4.15.55 S	+ 15	— 1
Oct.	1	20.59.18	4.23.45.22	2.21.14::S	0	— 6::
	10	4.24.46	8.25.37. 3	5.12.17 N	+ 22	+ 2
	15	8.45.53	11. 4.24.37	1.24.55 N	+ 10	— 25
	16	9.31.12	11.17.10.44	0.16. 2 N	+ 3	— 19
	17	10.15.13	11.29.45. 6	0.52.28 S	0	+ 16
	21	13.11.38		A.R.	+ 10	
	22	13.56.56½	2. 1.13.23	4.53.31 S	+ 29	+ 1
	24	15.30.52	2.25.50.36	5. 7. 6 S	+ 22	+ 1
	25	16.19.16	3. 8.20. 5	4.52.15 S	+ 43	+ 5
	28	18.48. 0½	4.17.23.34	2.43.30 S	+ 50	— 8
Nov.	9	5. 3.40	10. 3.16.47	3.37.23 N	— 7	— 12
	10	5.55.22	10.17. 1.35	2.40. 3 N	— 14	— 20
	11	6.43.58	11. 0.18.20	1.35.27 N	— 2	— 9
	12	7.30. 2	11.13.12. 5	0.27.57 N	— 9	— 2
	13	8.14.16	11.25.48.37	0.39. 8 S	— 6	+ 14
	15	9.40.19	0.20.30.15	2.11.54 S	— 11	+ 7
	22	15. 4.57	3.16.52.36	4.21.38 S	+ 32	+ 3
	23	15.53.56	3.29.37.32	3.42. 0 S	+ 39	+ 4
	25	17.31.49½	4.25.51.37	1.48.12 S	+ 53	— 1
	26	18.21. 0½	5. 9.29. 2	0.38.27 S	+ 54	— 7
Dec.	9	5.26. 2	11. 8.28.28	0.37.13 N	— 40	— 18
	10	6.11.46	11.21.24.53	0.31.23 S	— 39	+ 2
	14	9. 5. 3	1.10.48.54	4. 8.16 S	— 16	+ 7
	16	10.35.14	2. 5.17.59	4.55.43 S	+ 4	+ 9
	20	13.51.30½	3.25.39. 7	3.44.51 S	+ 32	+ 16
	21	14.40.49	4. 8.36.31	2.54. 6 S	+ 19	+ 15
	23	16.18.19	5. 5. 6.43	0.44.50 S	+ 6	+ 25
	27	19.38.49	7. 1.42.37	3.46.28 N	+ 18	— 3
	28	20.33.53	7.16.48. 5	3.31.17 N	+ 2	— 1

1756	Days, N. S.	Mean Time of Tranſit of ☽'s Limb. H. M. S.	☽'s Longitude obſerved. S. D. M. S.	☽'s Latitude obſerved. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Jan.	5	3. 16. 19		A.R.	— 46	
	7	4. 50. 32	11. 28. 53. 29	1. 26. 22 S	— 51	— 1
	10	7. 1. 30	1. 6. 17. 13	4. 7. 44 S	— 43	+ 2
	13	9. 17. 4	2. 13. 2. 56	5. 6. 31 S	— 17	+ 11
	15	10. 54. 12	3. 8. 11. 13	4. 35. 27 S	+ 12	+ 13
	16	11. 44. 8½	3. 21. 3. 14	3. 58. 18 S	+ 28	+ 13
	18	13. 26. 30	4. 17. 25. 44	2. 6. 31 S	+ 24	+ 23
	19	14. 16. 1	5. 0. 54. 49	0. 57. 7 S	+ 3	+ 18
	20	15. 5. 9	5. 14. 35. 42	0. 16. 47 N	— 8	— 18
	21	15. 54. 14	5. 28. 28. 59	1. 31. 1 N	— 20	— 20
	23	17. 34. 31	6. 26. 55. 18	3. 42. 6 N	— 11	— 21
	25	19. 21. 58	7. 26. 17. 23	5. 0. 38 N	— 4	— 10
Feb.	5	4. 11. 52	0. 18. 40. 27	3. 11. 51 S	— 35	0
	7	5. 39. 52	1. 13. 30. 53	4. 39. 0 S	— 35	— 3
	8	6. 24. 32½	1. 25. 45. 41	5. 3. 37 S	— 42	— 3
	10	7. 57. 21	2. 20. 21. 51	5. 10. 51 S	— 45	+ 4
	11	8. 45. 45	3. 2. 52. 50	4. 52. 31 S	— 33	+ 10
	13	10. 25. 33	3. 28. 38. 58	3. 32. 54 S	0	— 1
	14	11. 16. 10	4. 11. 57. 50	2. 33. 30 S	+ 16	0
	16	12. 59. 22	5. 9. 29. 4	0. 8. 1 S	+ 15	+ 9
	19	15. 31. 32	6. 22. 29. 8	3. 30. 25 N	— 20	— 12
	21	17. 17. 57	7. 21. 50. 21	4. 59. 39 N	— 21	— 12
	22	18. 13. 34	8. 6. 35. 31	5. 16. 10 N	— 18	— 10
Mar.	9	6. 37. 3	2. 27. 29. 59	5. 3. 46 S	— 40	+ 1
	12	9. 4. 49	4. 5. 47. 1	3. 2. 52 S	— 23	— 7
	13	9. 55. 12	4. 19. 11. 59	1. 57. 46 S	— 14	— 1
	16	12. 30. 40	6. 1. 47. 25	1. 52. 26 N	+ 32	+ 4
	20	16. 8. 20	8. 1. 54. 35	5. 11. 18 N	— 7	— 9
Apr.	9	7. 43. 57	4. 12. 56. 0	2. 23. 16 S	— 9	— 10
	10	8. 33. 30	4. 26. 18. 14	1. 15. 28 S	— 20	— 11
	11	9. 23. 33	5. 10. 7. 25	0. 1. 6 S	— 11	— 6
	12	10. 14. 27	5. 24. 26. 5	1. 15. 42 N	— 13	+ 3
	13	11. 6. 35	6. 9. 13. 10	2. 29. 51 N	— 2	+ 4
	14	12. 1. 33	6. 24. 25. 39	3. 35. 24 N	+ 23	+ 2
	22	19. 37. 34	10. 24. 1. 55	1. 23. 8 N	— 33	— 9

1756	Days N.S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
May	7	6. 24. 52	4. 20. 34. 37	1. 32. 37 S	+ 8	— 17
	8	7. 13. 15	5. 3. 49. 46	0. 23. 31 S	+ 7	— 14
	10	8. 52. 24½	6. 1. 45. 56	2. 1. 23 S	—21	+ 2
	12	10. 38. 44	7. 1. 48. 41	4. 3. 47 N	—10	— 7
	13	11. 35. 53	7. 17. 29. 33	4. 42. 40 N	+ 1	— 10
	15	13. 39. 44	8. 19. 20. 33	4. 54. 50 N	+33	— 18
	16	14. 41. 37	9. 5. 2. 47	4. 27. 10 N	+29	— 27
	17	15. 42. 0	9. 20. 21. 25	3. 40. 41 N	+ 8	— 29
	20	18. 24. 4½	11. 3. 14. 40	0. 20. 38 N	—42	— 17
	21	19. 11. 45	11. 16. 36. 7	0. 49. 58 S	—55	+ 7
June	1	2. 45. 32		A.R.	—11	
	3	4. 20. 56	4. 16. 4. 1	1. 40. 27 S	+ 1	— 37
	5	5. 55. 39	5. 12. 6. 19:	0. 35. 54: N	+25 :	— 2:
	6	6. 43. 39	5. 25. 41. 56	1. 45. 38 N	+ 4	+ 4
	8	8. 24. 18½	6. 24. 21. 56	3. 48. 46 N	—17	— 6
	10	10. 15. 59	7. 25. 4. 20	4. 57. 15 N	—36	— 16
	17	17. 7. 13	11. 11. 42. 36	0. 39. 30 S	—39	+ 13
	18	17. 54. 35½	11. 25. 7. 58	1. 48. 46 S	—38	+ 4
	19	18. 39. 55	0. 8. 9. 12	2. 50. 9 S	—44	+ 2
	20	19. 24. 3	0. 20. 51. 36	3. 41. 30 S	—46	— 1
	21	20. 7. 47	1. 3. 20. 18	4. 21. 17 S	—33	— 4
	22	20. 51. 48	1. 15. 40. 24	4. 48. 39: S	—25	— 27:
July	4	5. 28. 0	6. 4. 41. 54	2. 42. 28 N	+ 4	+ 5
	5	6. 16. 54	6. 18. 40. 50	3. 41. 1 N	— 2	+ 2
	6	7. 7. 56	7. 3. 6. 14	4. 27. 43 N	—13	— 7
	9	9. 59. 15	8. 18. 53. 0	4. 56. 12 N	—56	— 4
	10	11. 1. 19	9. 4. 38. 10	4. 22. 4 N	—49	— 26
	11	12. 3. 28	9. 20. 20. 2	3. 28. 1 N	—26	— 28
	13	14. 3. 20		A.R.	+23 :	
Aug.	1	4. 14. 28	6. 14. 19. 8	3. 32. 35 N	—25	+ 14
	3	5. 55. 21	7. 12. 44. 42	4. 57. 49 N	— 7	+ 3
	5	7. 46. 25	8. 12. 25. 25	5. 10. 4 N	—21	+ 1
	6	8. 45. 44	8. 27. 37. 51	4. 44. 19 N	—34	— 9
	9	11. 14. 47	10. 13. 22. 2	1. 40. 31 N	—30	— 22

	Days N.S.	Mean Time of Transit of ☽'s Limb.	☽'s Longitude observed.	☽'s Latitude observed.	Error of Tab. in Long.	Error of Tab. in Lat.
1756		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Aug.	10	12. 42. 37	10. 28. 13. 0	0. 19. 54 N	— 7	— 16
	12	14. 24. 41	11. 26. 40. 51	2. 13. 26 S	+ 17	+ 17
	13	15. 12. 8	0. 10. 16. 7	3. 17. 9 S	+ 13	+ 21
	14	15. 58. 6	0. 23. 27. 0	4. 8. 34 S	+ 27	+ 17
	15	16. 43. 19	1. 6. 17. 28	4. 45. 59 S	+ 25	+ 14
	28	2. 11. 55½		A.R.	— 7	
	31	4. 45. 26	7. 22. 56. 40	5. 13. 7 N	— 13	+ 2
Sept.	1	5. 40. 36½	8. 7. 37. 22	5. 15. 6 N	— 1	+ 11
	2	6. 37. 48	8. 22. 25. 20	4. 56. 39 N	+ 5	+ 1
	3	7. 36. 14½	9. 7. 17. 6	4. 18. 20 N	— 6	— 6
	6	10. 27. 50	10. 21. 34. 35	0. 56. 47 N	— 40	— 20
	7	11. 20. 53	11. 5. 59. 48	0. 22. 39 S	— 44	+ 22
	9	13. 2. 14	0. 3. 59. 3	2. 48. 13 S	— 12	— 21
	11	14. 35. 23	1. 0. 38. 3	4. 29. 54 S	+ 15	+ 18
	12	15. 21. 9	1. 13. 29. 29	4. 59. 17 S	+ 25	+ 14
	13	16. 6. 59	1. 26. 5. 21	5. 13. 24 S	+ 38	+ 11
	14	16. 53. 14	2. 8. 29. 43	5. 12. 37 S	+ 41	+ 8
	15	17. 40. 4½	2. 20. 47. 18	4. 57. 38 S	+ 32	— 5
	28	3. 35. 59½	8. 3. 6. 6	5. 11. 8 N	+ 8	+ 3
Oct.	1	6. 29. 18	9. 17. 31. 9	3. 35. 49 N	+ 7	+ 4
	2	7. 26. 8	10. 2. 3. 29	2. 32. 26 N	0	— 22
	3	8. 21. 0	10. 16. 24. 50	1. 20. 17 N	— 6	— 27
	4	9. 13. 54	11. 0. 34. 34::	0. 4. 8 N	— 26::	— 24
	5	10. 3. 49	11. 14. 30. 41	1. 10. 39 S	— 6	+ 41
	7	11. 39. 20	0. 11. 44. 46	3. 20. 47 S	— 51	+ 23
	9	13. 13. 38	1. 8. 1. 34	4. 43. 30 S	— 4	+ 1
	11	14. 46. 6	2. 3. 22. 9	5. 6. 44 S	+ 20	+ 2
	12	15. 32. 58	2. 15. 45. 38	4. 56. 24 S	+ 38	— 1
	16	18. 43. 23	4. 4. 57. 31	2. 12. 25 S	+ 32	— 36
	29	5. 22. 0½	9. 27. 41. 47	2. 40. 2 N	— 21	— 27
	30	6. 17. 46	10. 12. 9. 4	1. 30. 6 N	— 31	— 22
Nov.	1	8. 0. 55	11. 10. 6. 25	0. 56. 52 S	— 27	+ 30
	3	9. 35. 27	0. 7. 0. 54	3. 5. 29 S	— 46	— 26
	4	10. 21. 6	0. 20. 9. 27	3. 54. 42 S	— 57	+ 24
	5	11. 6. 28	1. 3. 6. 47	4. 30. 56 S	— 58	+ 18
	6	11. 52. 4½	1. 15. 53. 55	4. 53. 1 S	— 53	+ 8

1756	Days, N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Nov.	7	12. 38. 13	1. 28.31.38	5. 0. 6 S	— 35	+ 11
	8	13. 27. 5	2. 11. 0. 5	4. 52. 49 S	— 19	— 3
	10	15. 2. 1	3. 5.35. 3	2. 58. 3 S	+ 15	+ 6
	11	15. 49. 37	3. 17.47. 5	3. 13. 50 S	+ 28	— 15
	15	18. 57. 10	5. 7.46. 8	0. 53. 45 N	+ 47	+ 17
	27	5. 6. 38	10. 21.42. 5	0. 24. 12 N	— 66	— 14
	28	5. 58. 39	11. 5.51.25	0. 50. 32 S	— 63	+ 14
Dec.	3	9. 49. 29	1. 11.39.48	4. 51. 54 S	— 47	+ 14
	8	13. 45. 36	3. 13.32. 7::	3. 19. 28::S	+ 11::	+ 15::
	13	17. 37. 41		A.R.	+ 54	
	14	18. 23. 46	5. 28.44.29	2. 53. 16 N	+ 58	— 51
	16	20. 0. 28	6. 26.28.55	4. 30. 22 N	+ 15	— 15
	30	7. 48. 11	1. 7.41.18	4. 57. 9 S	— 54	+ 3
1757 Jan.	2	10. 5. 10	2. 14.58.24	4. 47. 18 S	— 39	— 3
	3	10. 52. 23	2. 27.13.48	4. 16. 32 S	— 23	— 8
	5	12. 30. 7	3. 21.43.26	2. 41. 4 S	— 8	+ 1
	7	14. 4. 18	4. 16.19.53	0. 35. 11 S	— 4	+ 4
	16	21. 29. 21	8. 19.32.46	4.41.13::N	— 6	— 49::
	25	4. 58. 20	0. 19.51.16	4. 26. 14 S	— 52	— 4
	27	6. 29. 57	1. 15.52. 0	5. 14. 15 S	— 40	— 3
	29	8. 1. 50	2. 10.47.43	5. 0. 48 S	— 38	— 3
	30	8. 48. 43	2. 23. 3.14	4. 33. 0 S	— 30	— 1
Feb.	1	10. 24. 2	3. 17.29.57 :	3. 2. 17::S	— 23 :	— 8::
	3	11. 59. 6	4. 12. 9.42	0. 57. 2 S	+ 15	— 8
	6	14. 19. 28	5.20.12.57::	2. 27. 54 N	— 18::	+ 3
	7	15. 5. 3	6. 3.17.23 :	3. 27. 51 N	— 24 :	— 10
	23	4. 22. 44	1. 10.26.33	5. 9. 47 S	— 20	+ 5
	25	5. 56. 10	2. 6. 1.15	5. 7. 58 S	— 27	— 3
	27	7. 30. 42	3. 0.41.27	4. 8. 53 S	— 28	+ 1
	28	8. 18. 25	3. 12.54. 1::	3. 22. 12::S	— 22::	— 19::
Mar.	1	9. 6. 10	3. 25. 8.30	2. 25. 45 S	— 23	— 12
	2	9. 53. 41	4. 7.28.49	1. 22. 16 S	— 15	— 12
	4	11. 27. 22	5. 2.40.32	0. 55. 35 N	+ 17	+ 14
	5	12. 14. 42	5. 15.37.14	2. 3. 57 N	+ 28	0
	7	13. 48. 43	6. 12.16.53	3. 59. 58 N	0	+ 10

1757	Days N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Mar.	10	16. 17. 26	7. 24. 7.50	5. 13. 14 N	— 7	— 6
	11	17. 11. 30	8. 8.31.53	5. 0. 54 N	— 25	— 12
	13	19. 6. 10	9. 7.51.10	3. 58. 56 N	— 7	+ 7
	26	5. 23. 25	2. 25.40.34	4. 16. 34 S	— 21	+ 6
	27	6. 11. 22	3. 7.57.40	3. 33. 59 S	— 18	— 2
	28	6. 59. 11	3. 20.10.47	2. 41. 28 S	— 28	— 2
	29	7. 46. 39½	4. 2.25.25	1. 41. 36 S	— 35	— 6
Apr.	3	11. 40. 3	6. 6.51.11	3. 38. 46 N	+ 32	+ 11
	4	12. 30. 20	6. 20.43.38	4. 23. 57 N	+ 56	— 11
	5	13. 20 11	7. 4.54.24	4. 53. 19 N	+ 30	+ 5
	6	14. 12. 12	7. 19.20.22	5. 4. 54 N	+ 11	+ 13
	12	19. 53. 45	10. 17.27.50	0. 16. 28 N	— 34	— 4
	26	6. 26. 33	4. 9.36. 6	0. 50. 44 S	— 18	— 28
	27	7. 12. 51	4. 21.56.46	0. 14. 47 N	— 27	+ 19
	28	7. 58. 41	5. 4.30.40	1. 20. 26 N	— 27	+ 25
	29	8. 44. 29	5. 17.23.22	2. 23. 40 N	— 25	+ 17
	30	9. 30. 46	6. 0.39.18	3. 20. 57 N	— 19	+ 9
May	1	10. 18. 12½	6. 14.21.25	4. 8. 28 N	0	+ 9
	3	12. 0. 27	7. 13. 4.47	4. 59. 20 N	+ 33	— 5
	6	14. 53. 24½	8. 28.16.57	3. 50. 7 N	+ 9	— 17
	8	16. 53. 2	9. 28.23. 8	1. 40. 57 N	— 35	— 19
	10	18. 44. 44	10. 27.37.40	0. 51. 48 S	— 51	+ 5
	29	8. 55. 44	6. 21.39.17	4. 36. 54 N	— 30	— 5
June	1	11. 35. 40	8. 5.50.48	4. 45. 4 N	— 7	— 14
	2	12. 38. 6	8. 21.21.17	4. 6. 40 N	+ 11	— 26
	3	13. 40. 8	9. 6.57.44	3. 9. 32 N	+ 10	— 29
	23	5. 17. 27	5. 19.37. 7	3. 0. 35 N	— 12	+ 30
	24	6. 1. 46½	6. 2.24.23	3. 52. 36 N	— 1	+ 7
	25	6. 47. 8	6. 15.35.14	4. 33. 26 N	— 21	+ 13
	26	7. 34. 27	6. 29.14.10	5. 0. 56 N	— 30	+ 4
	27	8. 24. 38	7. 13.24.39	5. 11. 17 N	— 44	+ 3
July	2	13. 26. 32	10. 0.38.22	1. 11. 21 N	+ 6	— 33
	5	16. 18. 26	11. 16.27.18	2. 49. 55 S	— 16	+ 12
	7	17. 57. 18	0. 14.48.59	4. 35. 11 S	— 8	+ 3
	9	19. 30. 36	1. 11.34.46	5. 14. 16 S	— 22	— 13

1757	Days, N. S.	Mean Time of Tranſit of ☽'s Limb. H. M. S.	☽'s Longitude obſerved. S. D. M. S.	☽'s Latitude obſerved. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
July	12	21. 51. 41		A.R.	— 1	
	24	6. 15. 50½	7. 7.29. 5	5. 15. 21 N	— 11	+ 10
	28	9. 59. 43	9. 6.31.59	3. 11. 24 N	— 70	— 19
	30	12. 5. 25	10. 8. 8.37	0. 29. 45 N	— 44	— 21
	31	13. 8. 14	10. 23.55.55	0. 58. 0 S	+ 11	+ 3
Aug.	1	14. 5. 22	11. 9.26. 1	2. 19. 33 S	+ 23	+ 5
	2	14. 59. 9	11. 24.32. 0	3. 29. 15 S	+ 26	+ 3
	6	18. 13. 59	1. 20.10.36	5. 15. 50 S	— 1	+ 2
	7	19. 1. 16	2. 3. 3.14	4. 59. 53 S	+ 10	— 14
	25	8. 44. 22½	9. 14.41.52::	2. 33. 29 N	— 68::	— 75::
	28	11. 45. 13	11. 1.19.15	1. 36. 52 S	— 53	— 19
	29	12. 43. 34	11. 16.47.45	2. 53. 40 S	— 6	+ 6
	30	13. 36. 55	0. 1.57. 8	3. 56. 15 S	+ 13	+ 7
	31	14. 28. 8	0. 16.42. 3	4. 41. 16 S	+ 22	+ 4
Sept.	1	15. 17. 50	1. 0.58.34	5. 7. 9 S	+ 29	+ 2
	3	16. 55. 10	11. 28. 5.49:	5. 3. 44 S	+ 28:	— 2
	18	3. 48. 13½	7. 26. 9.48	5. 0.29: N	+ 2	+ 22:
	19	4. 40. 53	8. 10.10.51	4. 34. 0: N	+ 5	+ 18:
	20	5. 36. 20	8. 24.27.51	3. 50. 2 N	+ 16	+ 21
	23	8. 32. 9	10. 8.49.55	0. 20. 2 N	— 41	— 13
	26	11. 19. 50½	11. 24.19.38	3. 25. 14 S	— 63	+ 26
	30	14. 44. 54	1. 22. 3.13	5. 1. 8 S	+ 4	+ 7
Oct.	2	16. 24. 8½	2. 18.26.50	4. 5. 17 S	+ 29	+ 11
	3	17. 13. 31	3. 1. 6.18	3. 19. 10 S	+ 27	+ 1
	18	4. 29. 19	9. 4.37.57::	2.56.41:: N	+ 6:	— 14::
	19	5. 27. 29	9. 19.11.38	1. 48. 48 N	— 7	— 9
	20	6. 25. 26	10. 3.50. 0	0. 33. 40 N	— 9	— 20
	23	9. 9. 50	11. 17.59.14	3. 5. 38 S	— 60	+ 28
	24	10. 1. 9	0. 2.39. 4	3. 59. 45 S	— 78	+ 25
	25	10. 51. 25	0. 17.10.58	4. 37. 36 S	— 78	+ 25
	28	13. 23. 18	1. 29.15.51	4. 42. 18 S	— 30	+ 16
	30	15. 3. 9	2. 25.35.30	3. 26. 43 S	— 16	+ 10
	31	15. 53. 56	3. 8.15.27	2. 33. 28 S	+ 29	0
Nov.	1	16. 42. 59	3. 20.40.18	1. 33. 34 S	+ 31	+ 4
	3	18. 17. 20	4. 15. 5.23	0. 34. 22 N	+ 31	+ 5

1757	Days, N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Nov.	5	19. 47. 2	5. 9.38.21	2. 36. 25 N	+ 22	+ 22
	7	21. 15. 30	6. 5. 5.40	4. 12. 0 N	+ 45	+ 41::
	16	4. 21. 1	9. 29.25.53	0. 41. 0 N	— 36	— 7
	17	5. 18. 29½	10. 14 10.22	0. 37. 6 S	— 49	+ 14
	20	7. 56. 37	11. 27.39.38	3. 54. 34 S	— 52	+ 31
	21	8. 45. 45	0. 11.53. 2	4. 34. 40 S	— 56	+ 23
	23	10. 22. 51	1. 9.49.22	5. 2. 21 S	— 66	+ 25
	24	11. 11. 58	1. 23.28.36	4. 49. 53 S	— 67	+ 20
	26	12. 54. 24	2. 20. 1.51	3. 39. 23 S	— 45	+ 9
	27	13. 44. 53	3. 2.53.10	2. 46. 45 S	— 27	+ 5
Dec.	4	19. 7. 57	5. 29.16.32	4. 8. 3 N	+ 22	0
	5	19. 51. 57	6. 12. 8.15	4. 42. 29 N	+ 22	0
	17	5. 54. 43	11. 23.22.53	3. 52. 55 S	— 59	+ 12
	18	6. 44. 7	0. 7.38.15	4. 36. 39 S	— 47	+ 11
	23	10. 45. 40½	2. 15. 7.54	3. 57. 28 S	— 35	+ 6
	27	14. 5. 19	4. 5.23.30	0. 5. 26 S	— 11	+ 4
1758 Jan.	2	18. 29. 14	6. 19.26. 0	5. 5. 10 N	+ 15	— 2
	13	3. 47. 56	11. 17.53.29	3. 38. 59 S	— 43	+ 2
	15	5. 29. 32	0. 17. 8.38	5. 3. 23 S	— 51	— 2
	16	6. 17. 55	1. 1. 8.29	5. 17. 10 S	— 41	— 10
	19	8. 42. 35	2. 11. 1.27	4. 15. 3 S	— 3	— 13
	26	14. 17. 40	5. 7.39.42	2. 55. 9: N	0	— 1:
	30	17. 8. 59½	6. 27.24.58	5. 15. 40 N	+ 12	— 20
Feb.	1	18. 42. 53	7. 23.57.10:	4. 59. 10 N	+ 9:	— 10
	11	3. 20. 14	0. 10.55.44	4. 50. 36 S	— 8	— 21
	13	5. 0. 46	1. 9.50.36	5. 14. 20 S	— 25	— 8
	15	6. 39. 16	2. 6.50.10	4. 26. 2 S	— 18	— 10
	16	7. 28. 40	2. 19.44.48:	3. 41. 18:: S	— 1:	— 13::
	17	8. 18. 9	3. 2.22.30	2. 46. 42 S	— 2	— 12
	18	9. 7. 21	3. 14.47.23	1. 45. 11 S	— 5	— 16
	20	10. 43. 8	4. 9.15.30	0. 27. 31 N	+ 5	+ 12
	27	15. 51. 34	7. 6. 7. 8	5. 11. 20 N	+ 8	— 15
Mar.	1	17. 27. 21	8. 2.38.31	4. 32. 43 N	+ 9	— 21
	3	19. 16. 4	9. 0.39.50	2. 49. 50 N	— 1	— 23
	15	5. 22. 13	2. 14.53.57	3. 49. 24 S	— 12	— 6

	Days N. S.	Mean Time of Tranſit of ☽'s Limb.	☽'s Longitude obſerved.	☽'s Latitude obſerved.	Error of Tab. in Long.	Error of Tab. in Lat.
1758		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Mar.	16	6. 12. 49	2. 27. 52. 17	2. 57. 18 S	— 4	— 9
	17	7. 2. 52	3. 10. 30. 21	1. 57. 56 S	— 23	— 19
	23	11. 37. 49	5. 24. 0. 38	3. 58. 8 N	+ 30	— 1
	24	12. 22. 36	6. 6. 31. 23	4. 33. 54 N	+ 65	— 32
				A.R.	+ 46	
	26	13. 49. 59	7. 2. 5. 17	5. 3. 14 N	+ 45	— 9
	28	15. 24. 24	7. 28. 30. 9	4. 31. 5 N	+ 7	— 10
	29	16. 15. 37	8. 12. 4. 23	3. 51. 30 N	0	— 15
	30	17. 9. 42	8. 25. 55. 0	2. 57. 33 N	+ 1	— 17
	31	18. 6. 12	9. 10. 3. 30:	1. 51. 33:: N	— 1:	— 11::
Apr.	13	4. 54. 47	3. 5. 22. 51	2. 8. 0 S	— 6	— 21
	14	5. 45. 22	3. 18. 4. 31	1. 4. 19 S	— 11	— 19
	16	7. 21. 39½	4. 12. 44. 11	1. 5. 39 N	— 11	+ 10
	19	9. 34. 25	5. 19. 23. 25	3. 48. 48 N	— 3	+ 12
	20	10. 17. 9½	6. 1. 51. 4	4. 25. 45 N	+ 16	+ 12
	22	11. 44. 20	6. 27. 27. 36	4. 59. 50 N	+ 41	+ 9
May	1	19. 48. 15	11. 3. 56. 52	2. 55. 38:: S	— 45	+ 5::
	2	20. 41. 27½	11. 18. 49. 40	3. 52. 47 S	— 57	+ 18
	10	2. 43. 35	2. 29. 31. 38	2. 22. 57 S	— 9	— 31
	11	3. 35. 44	3. 12. 35. 19	1. 18. 5 S	— 2	— 14
	12	4. 26. 24	3. 25. 18. 25	0. 11. 20: S	+ 6	— 30:
	13	5. 15. 7	4. 7. 45. 37	0. 54. 52 N	— 6	+ 32
	14	6. 1. 44	4. 20. 1. 53	1. 57. 44 N	— 10	+ 25
	16	7. 29. 47	5. 14. 26. 21	3. 43. 57 N	— 23	+ 19
	17	8. 12. 22	5. 26. 46. 20	4. 23. 5 N	— 23	+ 18
	18	8. 54. 57½	6. 9. 18. 29	4. 50. 24 N	— 14	+ 12
	19	9. 38. 24	6. 22. 6. 54	5. 3. 48 N	— 6	+ 7
	23	12. 58. 5	8. 16. 36. 23::	3. 16. 29 N	+ 8::	— 15
	26	15. 52. 8	10. 0. 6. 31	0. 20. 28 S	— 39	+ 22
	28	17. 44. 59	10. 29. 30. 55	2. 49. 25 S	— 60	+ 15
June	9	3. 7. 19	4. 2. 34. 14	0. 37. 31 N	— 7	+ 41
				A.R.	+ 2	
	10	3. 55. 15	4. 14. 59. 52	1. 43. 35: N	— 4	+ 35:
				A.R.	+ 6	
	13	6. 7. 25	5. 21. 40. 39	4. 19. 36 N	— 11	+ 21
	14	6. 49. 29	6. 4. 0. 48	4. 50. 48:: N	— 18	+ 28::
				A.R.	— 2	

1758	Days, N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
				A.R.	— 2	
June	17	9. 1. 35	7. 12. 36. 19	4. 59. 25 N	— 27	+ 1
	18	9. 50. 38	7. 26. 13. 5	4. 29. 22 N	— 29.	+ 1
	19	10. 43. 21	8. 10. 15. 5	3. 42. 40 N	— 17.	— 14
	20	11. 39. 43½	8. 24. 40. 57	2. 40. 36 N	— 26	— 23
	22	13. 41. 55	9. 24. 26. 37	0. 4. 54 N	— 15	— 30
	23	14. 41. 49	10. 9. 32. 15	1. 17. 31 S	— 26	+ 29
	26	17. 26. 56	11. 24. 27. 33	4. 30. 55 S	— 49	+ 21
	28	19. 6. 40	0. 23. 30. 4	5. 15. 33 S	— 27	+ 1
July	16	8. 29. 46½	8. 3. 31. 2:	4. 9. 31 S	— 60:	0
	17	9. 23. 46	8. 17. 36. 20	3. 15. 2: N	— 47	— 55:
				A.R.	— 56	
	19	11. 22. 16	9. 17. 11. 30	0. 44. 42 N	— 44	— 21
	24	16. 12. 51	0. 4. 7. 15	4. 55. 58 S	— 6	+ 10
	25	17. 3. 38	0. 18. 55. 56	5. 15. 22 S	— 11	— 3
	26	17. 53. 29	1. 3. 22. 36	5. 13. 59 S	— 16	— 3
	29	20. 24. 11	2. 14. 34. 19	3. 27. 13 S	+ 23	— 32
Aug.	11	5. 32. 31	7. 14. 28. 14:	4. 56. 35 N	+ 30:	+ 7
	12	6. 19. 41	7. 27. 33. 2	4. 25. 15 N	+ 20	+ 5
	17	11. 5. 12	10. 10. 0. 15	1. 20. 45 S	— 56	+ 28
	18	12. 6. 40	10. 25. 44. 33	2. 39. 59 S	— 21	+ 21
	20	14. 1. 26	11. 27. 20. 24	4. 36. 46 S	+ 22	+ 8
	21	14. 54. 50½	0. 12. 49. 50	5. 5. 5 S	+ 20	— 1
	22	15. 46. 49	0. 27. 55. 47	5. 11. 18 S	+ 9	— 7
	23	16. 38. 6½	1. 12. 33. 46	4. 56. 42 S	— 1	— 3
Sept.	9	5. 2. 57	8. 5. 52. 46	3. 47. 33: N	+ 39	+ 6:
	10	5. 54. 26	8. 19. 16. 11	2. 53. 33: N	+ 43	+ 6:
	12	7. 47. 2	9. 17. 24. 5::	0. 33. 34 N	— 20::	— 8
	15	10. 44. 39	11. 3. 7. 11	3. 14. 18 S	+ 64	+ 16
	16	11. 41. 37	11. 18. 58. 52	4. 11. 2 S	— 50	+ 12
	17	12. 39. 14	0. 4. 53. 16	4. 48. 26 S	— 18	+ 5
	18	13. 33. 14	0. 20. 35. 23	5. 3. 27 S	0	— 3
	19	14. 26. 32½	1. 5. 55. 50	4. 56. 4 S	+ 14	— 4
	20	15. 19. 40	1. 20. 27. 43	4. 28. 45 S	+ 6	— 11
	21	16. 12. 51	2. 5. 7. 28	3. 45. 8 S	+ 2	— 12
	23	17. 58. 47	3. 2. 14. 49	1. 46. 44 S	+ 6	— 10

	Days N. S.	Mean Time of Transit of ☽'s Limb.	☽'s Longitude observed.	☽'s Latitude observed.	Error of Tab. in Long.	Error of Tab. in Lat.
1758		H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Sept.	25	19. 40. 45	3. 27. 46. 31	0. 26. 48 N	+ 16	+ 15
	26	20. 29. 0	4. 10. 9. 31	1. 31. 29 N	+ 45	+ 1
Oct.	9	5. 37. 53	9. 12. 2. 41	0. 47. 1 N	+ 29	— 3
	10	6. 34. 48	9. 26. 10. 15	0. 27. 25 S	+ 12	+ 9
	11	7. 32. 14	10. 10. 42. 16	1. 42. 10 S	— 5	+ 13
	12	8. 29. 14	10. 25. 39. 31	2. 52. 9 S	— 56	+ 15
	13	9. 25. 9	11. 10. 57. 53	3. 51. 9 S	— 63	+ 15
	14	10. 19. 57	11. 26. 32. 27	3. 34. 12 S	— 77	+ 17
	15	11. 13. 58	0. 12. 13. 46	4. 56. 55 S	— 69	+ 29
	16	12. 10. 2	0. 27. 52. 9	4. 57. 35 S	— 45	+ 5
	17	13. 4. 4½	1. 13. 14. 6	4. 36. 23 S	— 28	+ 2
	19	14. 53. 37	2. 12. 40. 0	3. 2. 19 S	— 8	— 2
	21	16. 42. 22½	3. 10. 2. 40	0. 50. 55 S	+ 7	— 10
	26	20. 40. 6	5. 12. 28. 26	4. 1. 14. N	+ 34	+ 3
Nov.	5	3. 33. 47	9. 7. 52. 34	0. 53. 51. N	— 13	+ 12
	8	6. 21. 41	10. 20. 15. 4	2. 42. 57 S	— 14	+ 7
	9	7. 16. 0	11. 4. 55. 9	4. 43. 2 S	— 24	+ 8
	12	9. 53. 24	0. 20. 12. 35	5. 4. 15 S	— 55	+ 19
	13	10. 46. 5	1. 5. 26. 22	4. 50. 0 S	— 60	+ 21
	15	12. 37. 15	2. 5. 20. 11	3. 24. 37 S	— 35	+ 9
	16	13. 33. 7	2. 19. 44. 40	2. 21. 25 S	— 21	+ 10
	20	17. 5. 10½	4. 13. 0. 27	2. 15. 18 N	+ 21	— 2
	21	17. 51. 50	4. 25. 27. 6	3. 11. 54 N	+ 17	+ 8
	22	18. 36. 3	5. 7. 43. 5	3. 59. 10 N	+ 27	— 2
	23	19. 18. 29½	5. 19. 54. 41	4. 35. 7 N	+ 24	0
	24	19. 59. 58	6. 2. 7. 33	4. 58. 41 N	+ 26	— 5
Dec.	7	6. 5. 10	11. 15. 3. 46	4. 27. 34 S	— 37	+ 10
	8	6. 56. 11	11. 29. 45. 21	4. 59. 57 S	— 28	+ 14
	13	11. 16. 8	2. 12. 55. 40	2. 51. 50 S	— 35	+ 5
	16	14. 3. 43	3. 24. 14. 11	0. 45. 18 N	— 7	0
	18	15. 44. 4	4. 20. 2. 5	2. 56. 58 N	+ 24	+ 1
1759						
Jan.	2	3. 7. 29	10. 25. 38. 25	3. 22. 38 S	— 53	+ 11
	3	4. 1. 48	11. 10. 31. 11	4. 18. 28 S	— 54	+ 11
	6	6. 34. 3	0. 24. 42. 33	5. 13. 30 S	— 21	+ 3
	8	8. 15. 11	1. 23. 26. 33	4. 12. 7 S.	+ 10	— 13

1759	Dist. N. ☉	Mean Time of Tranſit of ☽'s Limb.	☽'s Longitude obſerved.	☽'s Latitude obſerved.	Error of Tab. in Long.	Error of Tab. in Lat.
	☉	H. M. S.	S. D. M. S.	D. M. S.	S.	S.
Jan.	12	11. 50. 34	3. 18.29.52	0. 13. 43 N	— 11	+ 18
	13	12. 45. 27	4. 1.40.23	1. 25. 42 N	— 12	+ 10
	14	13. 35. 35	4. 14.34.28	2. 31. 50 N	— 10	+ 5
	16	15. 7. 38	5. 9.41.12	4. 15. 18 N	+ 20	+ 3
	17	15. 50. 16	5. 21.59.13	4. 49. 13 N	+ 33,	— 3
	18	16. 31. 35	6. 4.12. 6	5. 9. 44 N	+ 35	— 7
	19	17. 12. 28	6. 16.24.32	5. 16. 18 N	+ 27	— 16
	20	17. 53. 51	6. 28.41.39	5. 8. 25 N	+ 24	— 6
	21	18. 36. 42	7. 11. 9. 7	4. 45. 58 N	+ 20	— 8
	22	19. 22. 1	7. 23.52.41	4. 9. 30 N	+ 16	— 22
Feb.	3	5. 21. 16	1. 4.45.56	4. 56. 8 S	— 32	— 4
	7	8. 50. 50½	3. 0.35.55	1. 21. 44 S	0	— 28
	11	12. 16. 23	4. 2.25. 1	3. 6. 12 N	— 15	+ 14
Mar.	5	5. 52. 54	2. 12.45.27	2. 38. 53 S	— 26	— 22
	6	6. 47. 3	2. 26.29.51	1. 32. 6 S	— 30	— 19
	7	7. 40. 50	3. 9.51.16	0. 22. 15 S	— 26	— 25
	9	9. 24. 7	4. 5.40.45	1. 52. 34 N	— 4	+ 26
	10	10. 12. 27	4. 18.16.29	2. 51. 24 N	— 20	— 18
	11	10. 58. 22	5. 0.43.16	3. 41. 10 N	— 18	+ 13
	12	11. 42. 7	5. 13. 3.45	4. 19. 57 N	— 24	+ 8
	13	12. 26. 15½	5. 25.20.37	4. 46. 29 N	+ 2	— 2
	16	14. 29. 31	7. 2. 0.54	4. 44. 23 N	+ 19	— 19
	17	15. 12. 7	7. 14.19.10	4. 16. 39 N	+ 17	— 20
Apr.	2	4. 38. 51	2. 21.20.50	1. 42. 24 S	— 3	— 18
	5	7. 20. 58	4. 1.37.10	1. 46. 3 N	— 24	+ 18
	7	8. 56. 53	4. 26.47.23	3. 36. 16 N	— 31	+ 3
	10	11. 4. 32	6. 3.33.24	4. 57. 29 N	— 5	+ 5
	12	12. 28. 26	6. 28. 2.22	4. 45. 24 N	— 1	— 13
	13	13. 10. 42	7. 10.21.59	4. 18. 57 N	+ 23	— 16
	14	13. 54. 45	7. 22.47.33	3. 39. 59 N	+ 11	— 22
	15	14. 41. 9	8. 5.21.18	2. 49. 41 N	— 28	— 18
	17	16. 21. 56½	9. 1. 5.26	0. 43. 47 N	— 21	— 14
	18	17. 15. 48	9. 14.22.41	0. 26. 40 S	— 25	+ 8
	30	13. 21. 52	2. 29. 5. 8	0. 49. 41 S	— 4	— 25

1759	Days, N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
May	1	4. 18. 54½	3. 13. 6.36	0. 25. 8 N	+ 3	+ 28
	2	5. 13. 40	3. 26.37.46	1. 36. 6 N	— 3	+ 24
	3	6. 5. 19	4. 9.43. 0	2. 39. 36 N	— 21	+ 22
	6	8. 21. 59	5. 17.12.39	4. 45. 52 N	— 25	+ 8
	8	9. 44. 6	6. 11.37.20	5. 5. 24 N	— 14	+ 6
	9	10. 24. 58	6. 23.51.52	4. 54. 27 N	— 6	0
	10	11. 6. 47	7. 6.11.51	4. 29. 39 N	— 19	— 4
	15	15. 11. 57	9. 10.18.13	0. 15. 56 S	— 42	+ 7
	17	17. 1. 31	10. 7.32.29	2. 36. 33 S	— 58	+ 2
	18	17. 55. 36	10. 21.36.32	3. 37. 13 S	— 66	0
June	2	6. 18. 26	5. 12.32.27	4. 45. 49 N	— 1	+ 22
	4	7. 41. 38	6. 7. 5.50	5. 13. 58 N	— 20	+ 12
	6	9. 3. 34	7. 1.35.52	4. 45. 31 N	— 17	— 14
	7	9. 46. 22½	7. 14. 0.52	4. 10. 44 N	— 13	— 2
	8	10. 31. 30	7. 26.36.54	3. 23. 20 N	— 4	— 6
	9	11. 19. 29	8. 9.26.31	2. 24. 50 N	— 8	— 6
	14	15. 52. 16½	10. 17.21.11	3. 26. 5 S	— 72	+ 14
	17	18. 27. 22	0. 0.43.26	5. 14. 43 S	— 60	+ 10
July	4	7. 41. 5	7. 8.57.59	4. 28. 15 N	— 12	+ 9
	5	8. 24. 57	7. 21.25.49	3. 45. 30 N	— 13	+ 9
	6	9. 11. 35	8. 4. 7.46	2. 51. 6 N	— 13	+ 6
	7	10. 1. 27½	8. 17. 7.28	1. 46. 45 N	— 23	— 2
	8	10. 54. 33	9. 0.27. 8	0. 35. 5 N	— 19	— 10
	9	11. 51. 19	9. 14. 8. 3	0. 40. 24 S	— 24	+ 17
	10	12. 49. 18½	9. 28. 8.31	1. 55. 16 S	— 28	+ 16
	11	13. 45. 47	10. 12.25.13	3. 4. 16 S	— 38	+ 23
	12	14. 40. 46	10. 26.55.16	4. 2. 39 S	— 59	+ 19
	13	15. 33. 45	11. 11.34.20	4. 45. 42 S	— 60	+ 21
	14	16. 24. 57	11. 26.18.30	5. 10. 16 S	— 64	+ 23
	15	17. 15. 3	0. 11. 4.14	5. 14. 32 S	— 47	+ 16
	17	18. 55. 54	1. 10.30.13	4. 22. 18 S	— 43	+ 2
	18	19. 48. 24	1. 25. 5.44	3. 30. 0 S	— 20	— 22
	19	20. 42. 59	2. 9.34.12	2. 14. 16 S	— 13	— 18
	20	21. 39. 23	2. 23.53.19	1. 10. 22 S	— 13	— 26
	31	5. 35. 47	7. 3.53.33	4. 36. 57 N	+ 30	+ 14

1759	Days, N. S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
Aug.	1	6. 18. 22	7. 16. 10. 44	4. 0. 1 N	+ 18	+ 3
	3	7. 51. 6	8. 11. 20. 55	2. 12. 10 N	— 11	— 4
	5	9. 36. 42½	9. 7. 52. 16	0. 8. 5 S	— 19	+ 14
	7	11. 30. 51	10. 6. 6. 3	2. 34. 18 S	— 29	+ 22
	8	12. 30. 5	10. 20. 48. 55	3. 37. 25 S	— 11	+ 21
	9	13. 25. 19	11. 5. 47. 13	4. 26. 50 S	— 17	+ 18
	10	14. 18. 40	11. 20. 54. 50	4. 57. 57 S	— 18	+ 26
	13	16. 52. 50	1. 6. 3. 56	4. 26. 55 S	— 51	+ 3
	15	18. 38. 47	2. 5. 11. 57	2. 37. 20 S	— 32	— 1
	17	20. 30. 8	3. 3. 20. 49	0. 13. 39 S	— 20	— 40
	26	2. 50. 53½	6. 16. 56. 19	4. 57. 27 N	+ 21	+ 18
	28	4. 13. 24	7. 11. 19. 7	4. 4. 41 N	+ 41	0
	30	5. 42. 38	8. 5. 57. 57	2. 26. 21 N	+ 32	— 3
	31	6. 31. 28	8. 18. 37. 29	1. 24. 2 N	+ 23	— 7
Sept.	3	9. 14. 43	9. 29. 2, 16::	2. 6. 2 S	— 26::	+ 15
	4	10. 11. 46	10. 13. 29. 59	3. 11. 0 S	— 49	+ 14
	5	11. 8. 11	10. 28. 25. 55	4. 5. 1 S	— 45	+ 13
	6	12. 4. 28½	11. 13. 45. 10	4. 43. 0 S	— 28	+ 8
	9	14. 45. 20	1. 0. 24. 21	4. 29. 49 S	— 17	+ 1
	10	15. 38. 53	1. 15. 38. 45	3. 44. 42 S	— 28	— 6
	11	16. 33. 34	2. 0. 32. 37	2. 45. 0 S	— 41	— 6
	12	17. 29. 26	2. 15. 3. 22	1. 35. 59 S	— 43	— 10
	13	18. 25. 55	2. 29. 11. 6	0. 22. 46 S	— 43	— 14
	15	20. 16. 35	3. 26. 24. 26	1. 58. 12 N	— 24	+ 5
	16	21. 8. 38½	4. 9. 34. 57		— 14	
	29	6. 6. 44½	9. 9. 16. 46	0. 40. 8 S	+ 19	+ 9
	30	7. 1. 2	9. 22. 37. 1	1. 48. 17 S	+ 4	+ 10
Oct.	2	8. 51. 48	10. 20. 48. 39	3. 48. 39 S	— 43	+ 12
	4	10. 40. 46½	11. 21. 5. 8	4. 55. 58 S	— 66	+ 14
	5	11. 34. 27½	0. 6. 48. 10	4. 59. 8 S	— 61	+ 12
	6	12. 30. 39	0. 22. 42. 12	4. 39. 32 S	— 29	+ 2
	7	13. 25. 27½	1. 8. 32. 17	3. 58. 21 S	— 22	0
	8	14. 21. 40½	1. 24. 8. 10	2. 59. 47 S	— 18	0
	12	18. 12. 17	3. 22. 10. 6	1. 52. 28 N	— 46	+ 4
	13	19. 5. 46½	4. 5. 32. 50	2. 54. 47 N	— 30	+ 7
	14	19. 55. 55	4. 18. 34. 42	3. 46. 16 N	— 17	+ 2
	28	5. 46. 51	10. 0. 53. 17	2. 42. 54 S	— 18	+ 3

1759	Days N. S.	Mean Time at Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of ☽'s Lab. in Long. S.	Error of ☽'s Lab. in Lat. S.
Nov.	1	9. 18. 14	11. 28. 30. 34	5. 7. 13 S	— 69	+ 2
	2	10. 10. 51	0. 14. 3. 48	4. 56. 18 S	— 80	+ 6
	3	11. 4. 43	0. 29. 52. 29	4. 22. 44 S	— 46	+ 11
	5	13. 1. 14	2. 1. 34. 39	2. 19. 16 S	— 34	— 3
	6	14. 1. 25	2. 17. 2. 32	1. 0. 23 S	— 26	+ 2
	13	20. 8. 20	5. 22. 15. 37	5. 9. 30 N	+ 8	— 20
	14	20. 49. 25	6. 4. 33. 51	5. 9. 15 N	+ 22	— 24
	15	21. 29. 46		A.R.	+ 28	
	27	6. 18. 15½	11. 7. 36. 28	4. 56. 7 S	— 28	— 6
	28	7. 8. 24	11. 22. 0. 12	5. 13. 39 S	— 30	— 3
	29	7. 58. 32	0. 6. 47. 59	5. 11. 12 S	— 39	+ 3
	30	8. 49. 36½	0. 21. 57. 24	4. 47. 19 S	— 37	+ 5
Dec.	2	10. 38. 35	1. 23. 0. 33	2. 59. 13 S	— 58	+ 9
	3	11. 37. 34	2. 8. 36. 51	1. 42. 25 S	— 49	+ 17
	7	15. 40. 10	4. 7. 58. 12	3. 26. 4 N	— 8	+ 3
	8	16. 32. 27	4. 21. 36. 48	4. 17. 4 N	— 58	— 8
	10	18. 5. 3	5. 17. 35. 30	5. 12. 28 N	+ 15	— 5
	11	18. 47. 9	6. 0. 5. 45	5. 17. 4 N	+ 18	— 16
	12	19 27. 53	6. 12. 23. 50	5. 6. 49 N	+ 19	— 9
	14	20. 49. 20	7. 6. 45. 21	4. 6. 13 N	+ 19	— 19
	15	21. 31. 57	7. 18. 58. 23	3. 17. 54 N	+ 16	+ 2
	26	5. 53. 53	0. 1. 41. 37	5. 16. 13 S	— 28	+ 3
	27	6. 42. 46	0. 16. 15. 8	5. 0. 17 S	— 17	+ 3
	28	7. 32. 52½	1. 1. 2. 12	4. 24. 30 S	— 8	— 3
	31	10. 19. 32	2. 16. 16. 23	1. 2. 9 S	— 17	— 7
1760 Jan.	1	11. 20. 30	3. 1. 20. 54	0. 21. 9 N	— 26	+ 4
	2	12. 24. 13	3. 16. 14. 16	1. 41. 42 N	— 7	+ 10
	3	13. 23. 28	4. 0. 47. 6	2. 53. 46 N	0	+ 3
	8	17. 23. 28	6. 7. 22. 16	5. 10. 37 S	+ 38	— 4
	22	3. 51. 48	11. 27. 22. 38	5. 11. 8 S	— 40	+ 14
	25	6. 20. 15.	1. 11. 6. 20	3. 43. 11. S	— 17	+ 6
	26	7. 13. 11	1. 25. 46. 14	2. 41. 8 S	— 8	— 7
	28	9. 7. 9	2. 25. 5. 13	0. 9. 55 S	— 5	— 15
	29	10. 6. 48	3. 9. 39. 5	1. 8. 28 N	— 19	+ 18
Feb.	2	13. 47. 39	5. 5. 43. 29	4. 47. 31 N	— 11	+ 14

	Days N.	Mean Time of Transit of ☽'s Limb.	☽'s Longitude observed.	☽'s Latitude observed.	Error of Tab. in Long.	Error of Tab. in Lat.
1760		H. M. S.	S. D. M. S.	D. M. S.	″. ″.	″.
Feb.	6	16. 39. 49	6. 26. 47. 49	4. 24. 24 N	+ 31	— 3
	9	18. 49. 3	8. 3. 25. 54	1. 58. 18 N	+ 5	— 25
	20	3. 26. 2		A.R.	— 8	
	22	5. 9. 36	1. 21. 24. 32	2. 47. 37 S	— 23	+ 1
	24	7. 1. 16½	2. 20. 30. 58	0. 22. 52 S	— 21	— 16
	25	7. 59. 30	3. 4. 49. 29	0. 52. 46 N	— 14	+ 25
	27	9. 54. 3	4. 2. 54. 3	3. 7. 2 N	— 26	+ 30
	28	10. 47. 33	4. 16. 38. 1	3. 57. 49 N	— 31	+ 31
	29	11. 37. 40	5. 0. 8. 16	4. 34. 16 N	— 39	+ 30
Mar.	1	12. 26. 40	5. 13. 24. 46	4. 55. 13 N	— 32	+ 17
	4	14. 34. 42½	6. 21. 41. 45	4. 25. 26 N	+ 7	— 1
	7	16. 42. 25	7. 28. 25. 23	2. 7. 14 N	— 5	— 26
	10	19. 8. 10		A.R.	— 20	
	21	3. 57. 56	2. 1. 7. 30	1. 47. 14 S	— 9	0
	22	4. 55. 40	2. 15. 59. 5	0. 30. 55 S	— 24	— 12
	27	9. 34. 9	4. 25. 41. 12	4. 31. 26 N	— 26	+ 26
	28	10. 21. 12	5. 8. 49. 32	4. 54. 8 N	— 39	+ 20
	29	11. 5. 34	5. 21. 44. 59	5. 1. 13 N	— 56	+ 18
	30	11. 48. 1½	6. 4. 28. 36	4. 53. 11 N	— 43	+ 8
	31	12. 31. 30	6. 17. 2. 22	4. 30. 56 N	— 24	— 3
Apr.	2	13. 54. 41	7. 11. 41. 46	3. 10. 14 N	— 4	— 18
	3	14. 37. 57½	7. 25. 52. 56	2. 16. 0 N	0	— 27
	4	15. 23. 8½	8. 6. 2. 52	1. 15. 12 N	— 17	— 27
	20	4. 45. 22	3. 9. 49. 41	1. 47. 47 N	— 18	+ 23
	22	6. 40. 22	4. 8. 7. 7	3. 52. 21 N	— 27	+ 20
	24	8. 20. 3	5. 4. 50. 13	4. 58. 57 N	— 17	+ 22
	26	9. 47. 19	6. 0. 25. 19½	5. 2. 57 N	— 29½	+ 6
	27	10. 28. 31	6. 12. 54. 59	4. 12. 38 N	— 18	+ 7
	29	11. 50. 45½	7. 7. 32. 8	3. 24. 46 N	— 22	— 12
	30	12. 35. 29½	7. 19. 44. 55	2. 30. 54 N	— 23	— 23
May	23	7. 46. 44½	5. 26. 24. 35	5. 13. 4 N	— 2	+ 12½
	24	8. 28. 15	6. 8. 57. 58	4. 56. 3 N	0	+ 14
	27	10. 31. 52½	7. 15. 45. 11½	2. 50. 49 N	— 10½	— 5
	28	11. 15. 37	7. 27. 55. 3	1. 50. 43 N	— 4	— 14
	31	13. 42. 23	9. 4. 48. 33	1. 30. 37 S	— 19	+ 1

1760	Days, N.S.	Mean Time of Transit of ☽'s Limb. H. M. S.	☽'s Longitude observed. S. D. M. S.	☽'s Latitude observed. D. M. S.	Error of Tab. in Long. S.	Error of Tab. in Lat. S.
June	2	15. 25. 26½	10. 0. 5.47½	3. 31. 54 S	— 50½	+ 11
	3	16. 16. 21	10. 13. 4. 6	4. 19. 30 S	— 52	+ 15
	18	4. 57. 49½	5. 8.26.54	5. 12. 23 N	+ 37	+ 24
	19	5. 43. 19½	5. 21.41.23	5. 16. 30 N	+ 30	+ 23
	21	7. 7. 26	6. 17. 4.55	4. 38. 4 N	+ 20	+ 14
	22	7. 48. 22	6. 29.24.33	3. 59. 14½ N	+ 30	+ 8½
	23	8. 29. 55	7. 11.36.36	3. 9. 56 N	+ 12	+ 5
	25	9. 58. 9	8. 5.57.12	1. 8. 11 N	+ 5	+ 3
	28	12. 29. 34	9. 13.15.19	2. 13. 5 S	— 7	+ 8
	29	13. 21. 42	9. 26. 2.12	3. 13. 5 S	— 10	+ 11
	30	14. 13. 19	10. 9. 1.58	4. 4. 3 S	— 31	+ 9
July	18	5. 3. 12½	6. 12. 7.27	4. 43. 24 N	+ 46	+ 27
	22	7. 53. 23	8. 1.25. 3	1. 27. 13 S	+ 13	+ 6
	23	8. 40. 6	8. 13.38.35	0. 21. 58 N	+ 14	0
	24	9. 29. 17	8. 26. 0.32	0. 44. 52 S	+ 10	+ 8
	27	12. 6. 39	10. 4.26.55	3. 45. 3 S	+ 4	+ 14
	29	13. 49. 21	11. 1.21.27	4. 55. 5 S	— 17	+ 13
Aug.	3	17. 50. 57	1. 12.13.48	2. 54. 28 S	— 4	+ 8
	4	18. 44. 12½	1. 26.53.59	1. 44. 41 S	— 38	+ 5
	21	8. 11. 36	9. 3.24.13	1. 32. 59 S	+ 1	+ 15
	23	9. 56. 14	9. 29. 1.49	3. 28. 32 S	— 3	+ 18
	27	13. 20. 47½	11. 24.10.50	4. 56. 37 S	— 12	+ 17
	28	14. 9. 4	0. 8.36.54	4. 34. 57 S	— 17	+ 9
	29	14. 57. 46	0. 23.11. 3½	3. 55. 41 S	— 19½	— 26
	31	16. 40. 25	1. 22.31. 8	1. 52. 13 S	— 45	— 5
Sept.	1	17. 35. 54	2. 7.12. 4	0. 37. 8 S	— 46	— 6
	17	6. 2. 30½	8. 28.11. 9	1. 21. 23 S	+ 14	+ 18
	20	8. 37. 18	10. 6.16.44	4. 4. 22 S	— 14	+ 21
	27	14. 34. 1	1. 17.23.37	2. 4. 16½ S	— 27	+ 1½
	29	16. 28. 40	2. 17.22.45½	0. 31. 47 N	— 52½	+ 6
Oct.	1	18. 29. 30	3. 16.40.32	2. 56. 46 N	— 48	+ 5
	18	7. 17. 36½	10. 13.29.37	4. 36. 56 S	— 10	+ 16
	20	8. 56. 33	11. 10.39 23	5. 9. 45 S	— 50	+ 17
	24	12. 20. 39	1. 10.18.31	2. 33. 12 S	— 40	— 6
	25	13. 17. 7	1. 25.51.40	1. 14. 45 S	— 45	— 7
Nov.	2	20. 46. 1	5. 21.34. 5	5. 6. 40 N	+ 22	+ 28

ELEMENTS

OF THE

LUNAR TABLES

WITH WHICH

The foregoing Series of Obſervations was compared;

AND ALSO OF

MAYER's Firſt and Second Manuſcript TABLES;

And of another SET of TABLES.

ELEMENTS

OF THE

LUNAR TABLES, &c.

AFTER Mayer's firſt manuſcript tables were put into the hands of the late Dr. Bradley in the beginning of the year 1755, he compared them with a great number of his obſervations made with the new inſtruments ſince the year 1750, and thence made out a new and corrected ſet of tables which are thoſe that the foregoing ſeries of 10 years obſervations was compared with.

Theſe tables being rather inferior to Mayer's ſecond manuſcript, which are now the printed tables, it is not thought neceſſary to print them, but inſtead of that I ſhall here exhibit their elements expreſſed in the manner of Mayer's Formulæ at the end of his Theoria Lunæ, together with thoſe of Mayer's ſecond manuſcript tables, and a ſet of tables conſtructed by that able computer the late Mr. Gael Morris, being (like Dr. Bradley's) corrections upon

upon Mayer's firſt manuſcript tables made by the help of Dr. Bradley's obſervations, a few copies of which were printed and given by the author to his friends.

The epochs of the mean longitudes of the Moon, her apogee and aſcending node to the beginning of the year 1750 N. S. the Moon's acceleration being included, are ſhewn in the following table.

	Mean Long. of ☽	Mean Long. of Apog.	Mean Long. of ☊
	S. D. M. S.	S. D. M. S.	S. D. M. S.
Mayer's 1ſt manuſcript	6. 8. 22. 39	5. 20. 55. 59	9. 10. 18. 38
Mayer's 2d manuſcript	6. 8. 22. 26	5. 20. 55. 54	9. 10. 19. 8
Dr. Bradley's tables	6. 8. 22. 20	5. 20. 55. 45	9. 10. 18. 30
Mr. Morris's tables	6. 8. 22. 27	5. 20. 55. 52	9. 10. 20. 0

The Maxima of the equations of the Moon's longitude are contained in the following table according to the form of that in p. 52 of Mayer's Theoria Lunæ.

Mayer's

	Mayer's 1st manuscript Tables.	Mayer's printed Tables.	Dr. Bradley's Tables.	Mr. Morris's Tables.
	D. M. S.	D. M. S.	D. M. S.	D. M. S.
I.	+ 0. 11. 14 sin. s	+ 0. 11. 16	+ 0. 11. 14	+ 0. 11. 14
	— 0. 0. 4 sin. $2s$	— 0. 0. 4	— 0. 0. 7	— 0. 0. 7
II.	— 0. 0. 56 sin. $(2\omega + s)$	— 0. 0. 54	— 0 0. 56	— 0. 0. 56
III.	— 0. 1. 6 sin. $(2\omega - s)$	— 0. 1. 9	— 0. 1. 6	— 0. 1. 10
IV.	+ 0. 0. 53 sin. $(2\omega + \dot{p})$	+ 0. 0. 54	+ 0. 1. 0	+ 0. 1. 5
V.	— 1. 20. 36 sin. $(2\omega - \dot{p})$	— 1. 20. 33	— 1. 20. 35	— 1. 20. 30
	+ 0. 0. 38 sin. $(4\omega - 2\dot{p})$	+ 0. 0. 35½	+ 0. 0. 35½	+ 0. 0. 35
VI.	+ 0. 2. 0 sin. $(2\omega - \dot{p} + s)$	+ 0. 2. 9	+ 0. 2. 0	+ 0. 2. 0
VII.	+ 0. 0. 39 sin. $(2\omega - \dot{p} - s)$	+ 0. 0. 49	+ 0. 0. 47	+ 0. 0. 47
VIII.	+ 0. 0. 28 sin. $(\dot{p} - s)$	+ 0. 0. 34	+ 0. 0. 28	+ 0. 0. 36
IX.	+ 0. 0. 56 sin. $(2\omega - 2\delta)$	+ 0. 0. 56	+ 0. 0. 51	+ 0. 0. 51
X.	+ 0. 0. 16 sin. $(\omega - \dot{p})$	+ 0. 0. 16	+ 0. 0. 16	+ 0. 0. 16
	— 0. 0. 57 sin. $(2\omega - 2\dot{p})$	— 0. 1. 0	— 0. 1. 0	— 0. 1. 0

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	Mayer's 1ſt manuſcript Tables.	Mayer's printed Tables.	Dr. Bradley's Tables.	Mr. Morris's Tables.
	D. M S.	D. M. S.	D. M. S.	D. M. S.
XI.	— 0. 18. 11 ſin. $\tilde{p}$	— 6. 18. 15	— 6. 18. 11	— 6. 18. 12
	+ 0. 12. 52 ſin. $2\tilde{p}$	+ 0. 13. 0	+ 0. 13. 0	+ 0. 13. 0
	— 0. 0. 37 ſin. $3\tilde{p}$	— 0. 0. 37	— 0. 0. 38	— 0. 0. 38
XII	— 0. 1. 55 ſin. $\tilde{\omega}$	— 0. 1. 55	— 0. 1. 57	— 0. 1. 57
	+ 0. 35. 47 ſin. $2\tilde{\omega}$	+ 0. 35. 43	+ 0. 35. 47	+ 0. 35. 47
	+ 0. 0. 2 ſin. $3\tilde{\omega}$	+ 0. 0. 2	0. 0. 0	0. 0. 0
	+ 0. 0. 14 ſin. $4\tilde{\omega}$	+ 0. 0. 12	+ 0. 0. 12	+ 0. 0. 12
XIII.	+ 0. 1. 25 ſin. $(2\tilde{\delta} - \tilde{p})$	+ 0. 1. 23	+ 0. 1. 26	+ 0. 1. 26
XIV.	— 0. 6. 51 ſin. $2\tilde{\delta}$	— 0. 6. 43	— 0. 6. 51	— 0. 6. 51
	ſin. $(\omega + s)$			— 0. 0. 15
	The annual Equation of the Moon's mean Anomaly.			
	+ 0. 25. 15 ſin. s	+ 0. 23. 12	+ 0. 22. 6	+ 0. 22. 6
	— 0. 0. $15\frac{1}{2}$ ſin. $2s$	— 0. 0. 6	— 0. 0. 14	— 0. 0. 14

	Mayer's 1ſt manuſcript Tables.	Mayer's printed Tables.	Dr. Bradley's Tables.	Mr. Morris's Tables.
	D. M. S.	D. M. S.	D. M. S.	D. M. S.
The annual Equation of the Moon's Aſcending Node.				
	+ 0. 9. 13 ſin. ☋	+ 0. 8. 50	+ 0. 9. 13	+ 0. 9. 13
	— 0. 0. $5\frac{1}{2}$ ſin. 2☋	— 0. 0. 2	— 0. 0. $5\frac{1}{2}$	— 0. 0. $5\frac{1}{2}$
The Equations of Latitude.				
I.	+ 5. 8. $31\frac{1}{3}$ ſin. ☽	+ 5. 8. 46	+ 5. 8. 42	+ 5. 8. 39
	— 0. 0. $5\frac{2}{3}$ ſin. 3☽	— 0. 0. 6	— 0. 0. 6	— 0. 0. 6
II.	+ 0. 8. 47 ſin. (2☉̃ — ☽)	+ 0. 8. 47	+ 0. 8. 47	+ 0. 8. 47
III.	- - - - ſin. (☽ — ☋)	+ 0. 0. 2,0	- - - -	- - - -
IV.	— 0. 0. 21,0 ſin. (☽ — ☿)	— 0. 0. 17,4	— 0. 0. 16	— 0. 0. 21
V.	— 0. 0. 23,0 ſin. (☽ — 2☿)	— 0. 0. 24,1	— 0. 0. 25	— 0. 0. 23
VI.	+ 0. 0. 2,7 ſin. (☽ — 3☿)	+ 0. 0. 2,7	- - - -	- - - -
VII.	— 0. 0. 9,7 ſin. (2☉̃ — ☽ + ☋)	— 0. 0. 8,3	- - - -	— 0. 0. 10

	Mayer's 1ſt manuſcript Tables.	Mayer's printed Tables.	Dr. Bradley's Tables.	Mr. Morris's Tables.
	D. M. S.	D. M. S.	D. M. S.	D. M. S.
	The Equations of Latitude continued.			
VIII.	— 0. 0. 3,6 ſin.$(2\tilde{\omega}-\tilde{\jmath}-s)$	— 0. 0. 3,7	- - - -	— 0. 0. $3\frac{1}{2}$
IX.	— 0. 0. 2,1 ſin.$(2\tilde{\omega}-\tilde{\jmath}+p)$	— 0. 0. 2,2	- - - -	- - - -
X.	+ 0. 0. 16,5 ſin.$(2\tilde{\omega}-\tilde{\jmath}-p)$	+ 0. 0. 15,0	+ 0. 0. 16	+ 0. 0. $16\frac{1}{2}$
XI.	— 0. 0. 6,4 ſin.$(2\tilde{\omega}-\tilde{\jmath}-2p)$	— 0. 0. 6,0	- - - -	— 0. 0. $6\frac{1}{2}$
	+ 0. 0. 2,1 ſin.$(2\tilde{\omega}+\tilde{\jmath}-2p)$			

The Maxima of the Tables of the Moon's Equatorial Parallax are as follows.

	Mayer's 1ſt manuſcript Tables.		Mayer's printed Tables.	Dr. Bradley's Tables.	Mr. Morris's Tables.
	M. S.		M. S.	M S.	M. S.
I.	- - - -	coſin. s	+ 0. 0, 3	- - - -	- - - -
II.	- - - -	coſ. $(2\omega+s)$	— 0. 0, 7	- - - -	- - - -
III.	- - - -	coſ. $(2\omega-s)$	— 0. 0, 8	- - - -	- - - -
IV.	- - - -	coſ. $(2\omega+\dot{p})$	+ 0. 0, 1	- - - -	- - - -
V.	— 0. 38 -	coſ. $(2\omega-\dot{p})$	— 0. 37, 3	— 0. 38	— 0. 38
	- - - -	coſ. $(4\omega-2\dot{p})$	+ 0. 0, 3	- - - -	- - - -
VI.	- - - -	coſ. $(2\omega-\dot{p}+s)$	+ 0. 1, 0	- - - -	- - - -
VII.	- - - -	coſ. $(2\omega-\dot{p}-s)$	+ 0. 0, 6	- - - -	- - - -
VIII.	- - - -	coſ. $(\dot{p}-s)$	+ 0. 0, 2	- - - -	- - - -
IX.	- - - -	coſ. $(2\omega-2\delta)$	+ 0. 0, 4	- - - -	- - - -
X.	- - - -	coſ. $(\omega-\dot{p})$	+ 0. 0, 2	- - - -	- - - -
	- - - -	coſ. $(2\omega-2\dot{p})$	+ 0. 2, 0	- - - -	- - - -

The Maxima of the Tables of the Moon's Equatorial Parallax continued.

	Mayer's 1ſt manuſcript Tables.		Mayer's printed Tables.	Dr. Bradley's Tables.	Mr. Morris's Tables.
	M. S.		M. S.	M. S.	M. S.
	57. 8	- - - - - -	57. 11, 0	57. 15½	57. 14
XI.	— 3. 8	cof. $\tilde{p}$	— 3. 7, 8	— 3. 8½	— 3. 8
	+ 0. 10	cof. $2\tilde{p}$	+ 0. 10, 0	+ 0. 10	+ 0. 10
	- - - -	cof. $3\tilde{p}$	— 0. 0, 2	- - - -	- - - -
	— 0. 1,5	cof. $\tilde{\omega}$	— 0. 1, 0	— 0. 1,5	— 0. 1,5
XII.	+ 0. 27	cof. $2\tilde{\omega}$	+ 0. 26, 0	+ 0. 27	+ 0. 27
	- - - -	cof. $4\tilde{\omega}$	+ 0. 0, 2	- - - -	- - - -
XIII.	- - - -	cof. $(2\tilde{\delta}-\tilde{p})$	+ 0. 0, 8	- - - -	- - - -

When the Moon's equatorial parallax is 57′. 8″. in Mayer's firſt manuſcript tables, it will be 57′. 11″. in the printed tables, 57′. 15½″. in Dr. Bradley's tables, and 57′. 14″. in Mr. Morris's tables; and at the ſame time the Moon's diameter will be given 31′. 10″. by both tables of Mayer, 31′. 14″. by Dr. Bradley's tables, and 31′. 13″. by Mr. Morris's tables.

Mayer, in conſtructing his firſt tables, ſuppoſed the ratio of the equatorial to the polar axis of the earth to be as 200 to 199, and Dr. Bradley and Mr. Morris have adopted the ſame: in Mayer's printed tables, the ratio of 231 to 230 is made uſe of.

REMARKS

REMARKS

ON THE

HADLEY'S QUADRANT.

BY

The Rev'd NEVIL MASKELYNE, B.D.F.R.S.
ASTRONOMER ROYAL.

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REMARKS, &c.

ALTHOUGH the Hadley's Quadrant, as contrived by Mr. Hadley, was equally fitted for obſerving angles from from 90° to 180° by the back-obſervation, as from 0° to 90° by the fore-obſervation, and the quadrants have accordingly been generally made with a back-horizon-glaſs as well as a fore-one to ſerve this double purpoſe, yet notwithſtanding the back-obſervation has been very little made uſe of to this time; partly owing to the difficulty of adjuſting the back-horizon-glaſs, and partly to the want of a director of the ſight, which, though recommended by Mr. Hadley, has, for I know not what reaſon, been generally omitted in the conſtruction of the inſtrument.

The difficulties of adjuſting the back-horizon-glaſs are happily lately got over by an ingenious contrivance of Mr. Dollond by means of an additional index applied to this glaſs (for which he has taken out a patent) whereby both its adjuſtments may be made by the ſame obſervations and with nearly the ſame exactneſs as thoſe of the fore-horizon-glaſs. The other impediment to the uſe of the back-obſervation, namely the want of a director of the ſight, will be removed by reſtoring it to the quadrant, or by applying a ſmall teleſcope to it, which will be more convenient and exact in celeſtial obſervations. The direction of the ſight will be rendered parallel to the plane of the quadrant by the proper conſtruction of the director; how to place the axis of the teleſcope exactly parallel to the

plane of the quadrant ſhall be ſhewn preſently; but firſt it is neceſſary to premiſe, that an adjuſting piece muſt be applied to the teleſcope for this purpoſe; that two thick parallel ſilver wires, dividing the diameter of the field of view into three equal parts, are to be placed in the focus of the eye-glaſs, which, by turning the eye-tube round about, are to be brought to appear parallel to the plane of the quadrant; and that the back-horizon-glaſs ſhould be ſilvered in the ſame manner as the fore-horizon-glaſs.

In order to adjuſt the axis of the teleſcope parallel to the plane of the quadrant proceed as follows; when the diſtance of the Moon from the Sun is greater than 90° (but the greater the better) by giving a ſweep with the quadrant and moving the index, bring the neareſt limbs to touch one another at the wire neareſt the plane of the quadrant: then, the index remaining unmoved, make the like obſervation at the wire fartheſt from the plane of the quadrant, and note whether the neareſt limbs are in contact as they were at the other wire; if they are, the axis of the teleſcope is parallel to the plane of the quadrant; but if they are not, it is inclined to the ſame, and muſt be corrected, as follows. If the neareſt limbs of the Sun and Moon ſeem to lap over one another at the wire fartheſt from the plane of the quadrant, the object end of the teleſcope is inclined from the plane of the quadrant, and muſt be altered by the adjuſtment made for that purpoſe; but if the neareſt limbs of the Sun and Moon do not come to touch one another at the wire fartheſt from the plane of the quadrant, the object end of the teleſcope is inclined towards the plane of the quadrant, and muſt be altered by the adjuſtment accordingly. Let theſe operations be repeated until the obſervation is the ſame at both the parallel wires; and the axis of the teleſcope will be adjuſted parallel to the plane of the quadrant. In like manner the axis of the teleſcope may be alſo adjuſted parallel to the plane of the quadrant for the fore-obſervation.

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The two parallel wires will be very uſeful on many occaſions, as well in the fore as the back-obſervation. In taking the altitude of the Sun, Moon, or Star, direct the ſight towards the part of the horizon underneath or oppoſite to the object, according as you intend to obſerve by the fore or the back-obſervation, and hold the quadrant that the wires may conſtantly appear perpendicular to the horizon, and move the index till you ſee the object come down towards the horizon in the fore-obſervation, or up to it in the back-obſervation, and turn the inſtrument in order to bring the object between the wires; then move the index till the Sun's or Moon's limb, or the Star touch the horizon. The nearer the object is brought to an imaginary line in the middle between the wires (it is indifferent what part of the line it is brought to) and the truer the wires are kept perpendicular to the horizon, the more exact will the obſervation be. In the fore-obſervation the object appears in its real poſition; but, in the back-obſervation, the object being brought through the zenith to the horizon, the real upper limb will appear the loweſt and the contrary. Either limb of the Sun may be uſed in either obſervation, but it will be moſt convenient in general to make the Sun appear againſt the ſky and not againſt the ſea; and then, the objects appearing inverted through the teleſcope, the Sun will appear loweſt and the horizon higheſt. The obſerved altitude is to be corrected for dip, refraction, and Sun's ſemidiameter as uſual.

In taking the diſtance of the neareſt limbs of the Sun and Moon, whether in the fore or back-obſervation, having firſt ſet the index to the diſtance nearly by the help of the Nautical Almanac, and brought the Moon to appear any where on or near the diameter of the field of view of the teleſcope, which biſects the interval between the wires, give a ſweep with the quadrant, and the Sun and Moon will paſs by one another: if, in this motion, the neareſt limbs, at their neareſt approach, juſt come to touch one another without lapping over, on or near any part of the diameter of the field of the teleſcope which biſects the interval

terval between the wires, the index is rightly ſet; but if the neareſt limbs either do not come to meet, or lap over one another, alter the index and repeat the obſervation till the neareſt limbs touch one another properly. This method of obſerving will be found much more eaſy and expeditious than without the wires; ſince in that caſe it would be neceſſary to make the limbs touch very near the center of the teleſcope, but here it is only neceſſary to make them do ſo any where on or near the diameter of the field of the teleſcope which biſects the interval between the wires. The ſame method may be uſed in taking the Moon's diſtance from a fixt Star.

It may not be amiſs here to make ſome remarks on the rules that have been uſually given for obſerving the Sun's altitude both with the fore and back-obſervation, which have all been defective, and to point out the proper directions to be followed when a teleſcope is not uſed with two parallel wires to direct the quadrant perpendicular to the horizon, and to ſhew the principles on which theſe directions are founded.

Obſervers are commonly told, that, in making the fore-obſervation they ſhould move the index to bring the Sun down to the part of the horizon directly beneath him, and turn the quadrant about upon the axis of viſion, and when the Sun touches the horizon at the loweſt part of the arch deſcribed by him the quadrant will ſhew the altitude above the viſible horizon. I allow that this rule would be true, if a perſon could by ſight certainly know the part of the horizon exactly beneath the Sun; but, as this is impoſſible, the precept is incomplete. Moreover, in taking the Sun's altitude in or near the zenith, this rule intirely fails, and the beſt obſervers adviſe to hold the quadrant vertical and turn one's ſelf about upon the heel, ſtopping when the Sun glides along the horizon without cutting it: and it is certain that this is a good rule in this caſe, and capable with care of anſwering the intended purpoſe. We have thus two rules for the ſame thing, which is a proof that neither

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is an univerſal one, or ſufficient in all caſes alone. In taking the back-obſervation, obſervers have been adviſed either to turn the quadrant about upon the axis of viſion, or holding the quadrant vertical to turn themſelves about upon the heel, indifferently. Here there is a diſtinction made between the methods of obſerving with the fore and back-obſervations, for which there is no foundation in the principles of the inſtrument. Beſides it ſeems ſtrange that two ſuch very different methods ſhould be equally preſcribed for the ſame purpoſe, ſince they cannot both be right, and perhaps neither may be ſo. The true ſtate of the caſe is this; that in taking the Sun's altitude, whether by the fore or back-obſervation, theſe two methods muſt be combined together; that is to ſay, the obſerver muſt turn the quadrant about upon the axis of viſion and at the ſame time turn himſelf about upon his heel, ſo as to keep the Sun always in that part of the horizon-glaſs which is at the ſame diſtance as the eye from the plane of the quadrant; for, unleſs the caution of obſerving the objects in the proper part of the horizon-glaſs be attended to, it is evident the angles meaſured cannot be the true ones. In this way the reflected Sun will appear to deſcribe an arch of a parallel circle round the true Sun, whoſe convex ſide will be downwards in the fore-obſervation and upwards in the back-obſervation, and conſequently when by moving the index the loweſt point of the arch in the fore-obſervation or the uppermoſt point of the arch in the back-obſervation is made to touch the horizon, the quadrant will ſtand in a vertical plane, and the altitude above the viſible horizon will be properly obſerved.

The reaſon of theſe operations may be thus explained. The image of the Sun being always kept in the axis of viſion, the index will always ſhew on the quadrant the diſtance between the Sun and any object ſeen directly which its image appears to touch; therefore, as long as the index remains unmoved, the image of the Sun will deſcribe an arch every-where equidiſtant from the Sun in the heavens, and conſequently a parallel circle about the Sun

as a pole; ſuch a tranſlation of the Sun's image can only be produced by the quadrant being turned about upon a line drawn from the eye to the Sun as an axis; a motion of rotation upon this line may be conſidered as compounded of two, one upon the axis of viſion and the other upon a vertical axis; therefore the obſerver by properly combining and proportioning theſe two motions, one of the quadrant upon the axis of viſion, the other of himſelf upon his heel, keeping himſelf upright (which gives the quadrant a motion upon a vertical axis) will cauſe the image of the Sun to deſcribe a parallel circle about the Sun in the heavens without departing from the axis of viſion. If it be aſked why the obſerver ſhould be directed to perform two motions rather than the ſingle one equivalent to them on a line drawn from the eye to the Sun as an axis? I anſwer, that we are not capable, while looking towards the horizon, of judging how to turn the quadrant about upon the elevated line going to the Sun as an axis, by any other means than by combining the two motions above-mentioned, ſo as to keep the Sun's image always in the proper part of the horizon-glaſs.

When the Sun is near the horizon the line going from the eye to the Sun will not be far removed from the axis of viſion, and conſequently the principal motion of the quadrant will be performed on the axis of viſion, and the part of the motion made on the vertical axis will be but ſmall. On the contrary, when the Sun is near the zenith, the line going to the Sun is not far removed from a vertical line, and conſequently the principal motion of the quadrant will be performed on a vertical axis by the obſerver's turning himſelf about, and the part of the motion made on the axis of viſion will be but ſmall. In intermediate altitudes of the Sun, the motions of the quadrant on the axis of viſion and a vertical axis will be more equally divided. Hence appears the reaſon of the method uſed by the beſt obſervers in taking the Sun's altitude when near the zenith, by holding the quadrant vertical and turning one's ſelf about upon the heel; and the defects

defects of the rules that have been commonly given for obſerving altitudes in other caſes.

There is a ſource of error which may affect both the fore and back-obſervations, namely, if the two ſurfaces of the index-glaſs are not exact parallel planes but inclined to one another in a ſmall angle: The rays reflected from the back-ſurface of ſuch a glaſs will not proceed in the ſame direction as they would have done if the two ſurfaces had been parallel, and the error will increaſe with the obliquity with which the rays fall on the glaſs; and therefore, in meaſuring large angles with the fore-obſervation, or ſmall angles with the back-obſervation, a ſmall defect in the paralleliſm of the planes of the two ſurfaces may produce a ſenſible error in the obſervation. It is true that this error may be removed, if the thickeſt and thinneſt edges of the glaſs be placed parallel to the plane of the quadrant, agreeable to Mr. Hadley's directions. But, as it may well be queſtioned whether this care is always taken by the inſtrument-maker, and it cannot be ſuppoſed that the glaſſes can be ground perfect parallel planes, it would certainly be an advantage acquired to the inſtrument could the error ariſing from a want of paralleliſm of the planes be removed in whatever poſition the thickeſt and thinneſt edges of the index-glaſs ſhould be placed with reſpect to the plane of the quadrant. This will be effected for celeſtial obſervations if the upper part of the index-glaſs be left unſilvered on the back and made rough and blacked, the lower part of the glaſs being ſilvered as uſual, which muſt be covered whenever any celeſtial obſervations are made. Then, if the teleſcope be ſufficiently raiſed above the plane of the quadrant, it is evident that the obſervations will be made by rays reflected from the fore-ſurface of the upper part of the index-glaſs, and conſequently if the quadrant be adjuſted by making uſe of the ſame part of the index-glaſs, the obſervations will be true whether the two ſurfaces of the glaſs are parallel planes or not. The Sun or Moon may be thus obſerved by reflection from the unſilvered parts of the index-glaſs and horizon-glaſs, ſo that a paler darkening glaſs will ſuf-

fice, and they will appear much diſtincter than from an index-glaſs wholly ſilvered with a deeper darkening glaſs; for although the ſurfaces of a glaſs may be very parallel, yet there always ariſes ſome little confuſion from the double reflection. Neither will the Moon appear too weak by two unſilvered reflections, even when her creſcent is very ſmall, except ſhe ſhould be hazy or clouded or low towards the horizon; and then the light may be increaſed by lowering the teleſcope ſo as to take in part of the ſilvered reflection of the index-glaſs, which in this caſe muſt be uncovered: the ſame is alſo to be underſtood with reſpect to the Sun, ſhould his light be too much weakened by hazineſs or thin clouds.

The horizon-glaſſes ſhould be adjuſted, or the error of adjuſtment found by the Sun or Moon; the firſt will be in general the beſt object for the purpoſe; and, as the Sun or Moon ſeen directly through the unſilvered part of the horizon-glaſs will be much brighter than the image of the ſame ſeen by two unſilvered reflections, it muſt be weakened by a deep darkening glaſs placed beyond the horizon-glaſs, the reflected image being farther weakened, if neceſſary, by a paler darkening glaſs placed in the uſual manner between the index-glaſs and horizon-glaſs.

If a quadrant was deſigned principally for taking the diſtance of the Moon from the Sun and fixed Stars, and was not wanted for obſerving terreſtrial angles, it would be the beſt way to have none of the glaſſes ſilvered, but to leave both the horizon-glaſſes intirely tranſparent, and to put a red glaſs for the index-glaſs of the ſame matter with the darkening glaſſes, which would reflect light from the fore-ſurface only. The Sun's altitude might be alſo obſerved with this inſtrument, either by the fore or back-obſervation; and the altitude of the Moon might be taken with it in the night. But the altitudes of Stars could not be obſerved with it, nor the Moon's altitude in the day-time, which would however be no great inconvenience as theſe

obſervations

obſervations might well enough be ſupplied by common quadrants.

The following rules for the ſize of the glaſſes, and the ſilvering them, and the height of the teleſcope may be of uſe. The index-glaſs and two horizon-glaſſes ſhould be all of equal height, and even with one another in height both at top and bottom. The teleſcope ſhould be moveable parallel to itſelf nearer to or farther from the plane of the quadrant, and the range of its motion ſhould be ſuch that its axis, when at the loweſt ſtation, ſhould point about one tenth of an inch lower than the top of the ſilvering of the horizon-glaſſes; and when at the higheſt ſtation ſhould point to the height of the middle of the unſilvered part of the index-glaſs. The height of the glaſſes, and the quantity of the parts ſilvered and parts unſilvered, ſhould vary according to the aperture of the object-glaſs, as in the following table; where the firſt column of figures ſhews the dimenſions, in parts of an inch, anſwering to an aperture of three tenths of an inch in diameter; the ſecond column, what anſwer to an aperture of the object-glaſs of four tenths of an inch in diameter; and the third, what are ſuitable to an aperture of the object-glaſs of five tenths of an inch in diameter.

	Parts of an inch.		
Diameter of aperture of object-glaſs —	,30	0, 40	0, 50
Height of glaſſes — — — —	,90	1, 13	1, 37
Height of ſilvered part of index-glaſs —	,50	0, 63	0, 77
Height of unſilvered part of ditto — —	,40	0, 50	0, 60
Height of ſilvered part of horizon-glaſſes	,25	0, 33	0, 42
Height of unſilvered part of ditto — —	,65	0, 80	0, 95

If the teleſcope has a common object-glaſs, the firſt aperture of three tenths of an inch will be moſt convenient; but if it has an achromatic object-glaſs, one of the other apertures of four tenths or five tenths of an inch will be

moſt proper. The field of view of the teleſcope ſhould be five or ſix degrees, and the objects ſhould be rendered as diſtinct as poſſible throughout the whole field by applying two eye-glaſſes to the teleſcope. The length of the index-glaſs and breadth of the horizon-glaſſes ſhould be determined as uſual according to the obliquity with which the rays fall on them, and the aperture of the object-glaſs.

I ſhall conclude this paper with ſome eaſy rules for finding the apparent angular diſtance between any two near hand-objects by the Hadley's Quadrant.

To find the angular diſtance between two near objects by the fore-obſervation.—Adjuſt the fore-horizon-glaſs by the object intended to be taken as the direct object; and the angle meaſured by the fore-obſervation on the arch of the quadrant, between this object and any other object ſeen by reflection, will be the true angle between them as ſeen from the centre of the index-glaſs.—But if the quadrant be already well adjuſted by a diſtant object, and you do not chuſe to alter it by adjuſting it by a near one, move the index and bring the image of the near direct object to coincide with the ſame ſeen directly; and the number of minutes by which (*o*) of the index ſtands to the right hand of (*o*) of the quadrant upon the arch of exceſs is the correction, which added to the angle meaſured by the arch of the quadrant between this direct object and any other object ſeen by reflection, will give the true angular diſtance between them reduced to the centre of the index-glaſs.

To find the angular diſtance between two near objects by the back-obſervation.—It is ſuppoſed that the back-horizon-glaſs is truly adjuſted; if it is not, let it be ſo. Obſerve the diſtance of the objects by the back-obſervation, and take the ſupplement of the degrees and minutes ſtanding upon the arch to 180 degrees, which call the inſtrumental angular diſtance of the objects; this is to be corrected as follows. Keep the centre of the quadrant or index-glaſs in the ſame place as it had in the foregoing obſervation,

ſervation, and obſerve the diſtance between the near object, which has been juſt taken as the direct object and ſome diſtant object twice; by making both objects to be the direct and reflected ones alternately, holding the divided arch upwards in one caſe and downwards in the other, ſtill preſerving the place of the centre of the quadrant. The difference of theſe two obſervations will be the correction, which, added to the inſtrumental angular diſtance found as above in the firſt obſervation between the firſt object and any other object ſeen by reflection, will give the true angular diſtance between them reduced to the centre of the index-glaſs.

But if you ſhould happen to be in a place where you cannot command a convenient diſtant object, the following method may be uſed. The back-horizon-glaſs being adjuſted, find the inſtrumental angular diſtance between the objects; this is to be corrected by means of the following operations. Set up a mark at any convenient diſtance, oppoſite or nearly ſo to the object which has been taken as the direct object; and looking at the direct object move the index of the quadrant, and bring the image of the mark to coincide with the direct object, and read off the degrees and minutes ſtanding on the arch of the quadrant, which ſubtract from 180 degrees if (o) of the index falls upon the quadrantal arch, but add to 180 degrees if it falls upon the arch of exceſs, and you will have the inſtrumental angular diſtance of the objects. Invert the plane of the quadrant, taking care at the ſame time not to change the place of its centre, and looking at the ſame direct object, as before, move the index of the quadrant and bring the image of the mark again to coincide with the direct object, and read off the degrees and minutes ſtanding on the arch, and thence alſo find the inſtrumental angular diſtance of the objects. Take the ſum of this and the former inſtrumental angular diſtance; half its difference from 360 degrees will be the correction, which, added to the inſtrumental angular diſtance firſt found between the ſame direct object and the other object ſeen by reflection,

reflection, will give the true angular diſtance between them reduced to the centre of the index-glaſs. It is to be obſerved, that if the mark be ſet up at the ſame diſtance from the quadrant as the direct object is, there will be no occaſion to invert the plane of the quadrant; but the obſerver need only make the image of the mark coincide with the direct object, then turn himſelf half round, and now taking the mark for the direct object, cauſe the image of the former direct object to coincide with the mark, the divided arch of the quadrant being kept upwards, and the place of the centre of the quadrant remaining alſo the ſame in both caſes: half the difference of the ſum of the two inſtrumental angles from 360 degrees will be the correction of the adjuſtment as before.

Should only one of the objects be near and the other remote (that is to ſay half a mile diſtant or more) let the diſtant object be taken for the direct one and the near object for the reflected one, and the true diſtance of the objects as ſeen from the centre of the index-glaſs will be obtained without requiring any correction, whether it be the back or fore-obſervation that is made uſe of; only obſerving as uſual to take the ſupplement of what is ſhewn upon the arch to 180 degrees in the back-obſervation.

A PROBLEM

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PROBLEM

TO FIND

The ERROR in the POSITION of a MERIDIANAL TELESCOPE.

BY

MR. LYONS.